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# SIXTY-FOURTH ANNUAL REPORT

OF THE

## Ohio State Board of Agriculture

WITH AN ABSTRACT OF  
THE PROCEEDINGS OF

### The County Agricultural Societies

For the Year 1909

TO THE

General Assembly of the State of Ohio



Springfield, Ohio:  
The Springfield Publishing Company,  
State Printers.  
1910.

# ANNUAL REPORT

## Ohio Department of Agriculture

March 1, 1910, Columbus, Ohio.

*To the General Assembly of Ohio.*

GENTLEMEN:—Agreeable to Sections 3693 and 3694, R. S. of Ohio, herewith submitted is the sixty-fourth annual report of the Ohio Department of Agriculture, for year ending March 1, 1910.

Embraced herein is summary of work done.

The State Fair was a success.

Receipts reached highwater mark.

After paying increased premiums a profit of \$17,000.00 was paid into the state treasury.

Reports of farmers' institutes held in each county were optimistic.

Added interest and increased attendance was general.

Experiment station men assisted at many meetings.

Farmers appreciated their services.

Demand for instructors growing.

Limited funds prevent fulfillment of what might be accomplished.

Our live stock department had a marvelous growth during the year as shown by following figures:

Investigations by state veterinarians increased from 159 in 1908 to 387 in 1909.

Cows tested for tuberculosis in 1908, 198; 1909, 1,189.

Glanders investigations 31 in 1908 to 15 in 1909.

Sheep investigations, 22 in 1908 to 78 in 1909.

Hogs immunized against cholera, 400 in 1908 to 5,428 in 1909.

The nursery and orchard inspection work also had a marvelous growth.

Nurseries inspected in 1908, 691; in 1909, 840.

Orchards inspected in 1908, 90; in 1909, 400.

Orchard demonstrations in 1908, none; in 1909, 5.

Exhibits at fairs in 1909, 2.

Trees inspected in 1908, 82,110; in 1909, 230,051.

Inspection of feed stuffs almost doubled.

In 1908, 171 brands were licensed, 146 brands analyzed.

In 1909, 303 brands were licensed, 291 analyzed.

The inspection of commercial fertilizers also made a remarkable increase.

In 1908, 565 brands were licensed, 497 analyzed.

In 1909, 666 brands were licensed, 616 analyzed.

The demand for official bulletins of this department has also increased from a circulation of 2,000 to 50,000.

Agricultural trains for the first time were run, and much good done.

The correspondence at the office has doubled during the year.

This remarkable growth of the department is due largely to the great interest which farmers are taking in agriculture, and their own business.

Respectfully submitted,

THE OHIO STATE BOARD OF AGRICULTURE.

A. P. SANDLES,

*Secretary.*

J. W. FLEMING,

*Assistant Secretary.*



# Ohio State Board of Agriculture 1909

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## OFFICERS

L. W. KILGORE, President.  
WILLIAM MILLER, Vice-President.  
C. W. McFARLAND, Treasurer.  
A. P. SANDLES, Secretary, Columbus.  
J. W. FLEMING, Assistant Secretary, Columbus.

---

## MEMBERS

	Term Expires.
T. E. CROMLEY, Ashville, Pickaway County.....	January, 1910
L. W. KILGORE, London, Madison County.....	January, 1910
WILLIAM MILLER, Gypsum, Ottawa County.....	January, 1911
C. W. McFARLAND, Galion, Morrow County.....	January, 1911
C. H. GANSON, Urbana, Champaign County.....	January, 1912
JACOB DEAN, Chester, Meigs County.....	January, 1912
P. G. EWART, East Akron, Summit County.....	January, 1913
G. E. JOBE, Cedarville, Greene County.....	January, 1913
J. A. BEIDLER, Willoughby, Lake County.....	January, 1914
J. F. CROSS, Washington C. H., Fayette County.....	January, 1914

---

## EXECUTIVE COMMITTEE

C. W. McFARLAND, Chairman;	G. E. JOBE,
T. E. CROMLEY,	J. F. CROSS.

---

## FARMERS' INSTITUTE COMMITTEE

T. E. CROMLEY, Chairman;	J. A. BEIDLER,
C. W. McFARLAND.	

---

## AUDITING COMMITTEE

WILLIAM MILLER, Chairman;	G. E. JOBE,
P. G. EWART.	

---

## BUILDING AND GROUNDS COMMITTEE

L. W. KILGORE, Chairman;	C. H. GANSON,
A. P. SANDLES.	

# Ohio State Board of Agriculture 1910

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## OFFICERS

C. W. McFARLAND, President.

C. H. GANSON, Vice-President.

L. W. KILGORE, Treasurer.

A. P. SANDLES, Secretary, Columbus.

J. W. FLEMING, Assistant Secretary, Columbus.

---

## MEMBERS

	Term Expires.
WILLIAM MILLER, Gypsum, Ottawa County-----	January, 1911
C. W. McFARLAND, Mt. Giload, Morrow County-----	January, 1911
C. H. GANSON, Urbana, Champaign County-----	January, 1912
JACOB DEAN, Chester, Meigs County-----	January, 1912
P. G. EWART, East Akron, Summit County-----	January, 1913
E. L. LYBARGER, Warsaw, Coshocton County-----	January, 1913
J. A. BEIDLER, Willoughby, Lake County-----	January, 1914
J. F. CROSS, Washington C. H., Fayette County-----	January, 1914
T. E. CROMLEY, Ashville, Pickaway County-----	January, 1915
L. W. KILGORE, London, Madison County-----	January, 1915

---

## AUDITING COMMITTEE

J. A. BEIDLER,  
J. F. CROSS,

JACOB DEAN,  
C. H. GANSON.

---

## INSTITUTE COMMITTEE

T. E. CROMLEY,  
E. L. LYBARGER,

P. G. EWART,  
WM. MILLER.

---

## GROUND AND BUILDINGS COMMITTEE

C. W. McFARLAND,

A. P. SANDLES.

L. W. KILGORE,

# LIST OF MEMBERS OF THE OHIO STATE BOARD OF AGRICULTURE FROM THE ORGANIZATION OF THE BOARD TO DATE.

(NOTE.—The act creating the State Board of Agriculture, passed in 1846, provided for fifty-three members and named them. The act was amended in 1847, reducing the number of members to ten. Five members were elected each year for a term of two years until 1898, when the act was so amended as to provide for the election of two members each year for a term of five years.)

Names.	Years of Service, Inclusive.	Residence.
John B. Bayless.....	1846	Jefferson County.
Henry C. Brish.....	1846	Seneca County.
Frederick Bonner.....	1846	Greene County.
Joseph Burns.....	1846	Coshocton County
John Chaney.....	1846	Fairfield County.
G. W. Cowden.....	1846	Trumbull County.
Absalom Dun.....	1846	Butler County.
John Eckels.....	1846	Hancock County.
Elias Florence.....	1846	Pickaway County.
John Fuller.....	1846	Erie County.
Geo. W. Gibbons.....	1846	Muskingum County.
William Gill.....	1846	Pickaway County.
H. N. Gillett.....	1846	Lawrence County.
L. C. Goble.....	1846	Putnam County.
David Gregory.....	1846	Delaware County.
Anson Howard.....	1846	Champaign County.
John Johnson.....	1846	Miami County.
Aaron Johnson.....	1846	Perry County.
Greenbury Keen.....	1846	Portage County.
Billius Kirtland.....	1846	Mahoning County.
Newton Larsh.....	1846	Preble County.
Liba Lindley.....	1846	Athens County.
Jas. Loudon.....	1846	Brown County.
John McElderry.....	1846	Tuscarawas County.
Wm. McFadden.....	1846	Harrison County.
Beatty McFarland.....	1846	Jefferson County.
John Martin.....	1846	Columbiana County.
Isaac Moore.....	1846	Lake County.
Gilman C. Mudgett.....	1846	Paulding County.
Samuel Myers.....	1846	Crawford County.
Isaac Neiswanger.....	1846	Belmont County.
Simon Perkins.....	1846	Summit County.
Henry Protzman.....	1846	Montgomery County.
W. R. Putman, Jr.....	1846	Washington County.
Felix Renick.....	1846	Roes County.
Jas. L. Reynolds.....	1846	Stark County.
Benj. Ruggles.....	1846	Belmont County.
Sam'l Spangler.....	1846	Fairfield County.
David Stevens.....	1846	Richland County.
Abraham Studdebaker.....	1846	Darke County.
Dowty Utter.....	1846	Clermont County.
John I. Vanmeter.....	1846	Pike County.
Richard Warner.....	1846	Medina County.
Jesse Wilson.....	1846	Shelby County
J. M. Millikin.....	1846	Hamilton.
J. T. Pugsley.....	1846	Convenience.
Allen Trimble.....	1846-51	Hillsboro.
M. L. Sullivan.....	1846-53	Columbus.
Sam'l Medary.....	1846-53	Columbus.
Darius Lapham.....	1846-50	Cincinnati.

## MEMBERS OF THE STATE BOARD OF AGRICULTURE.—Continued.

Names.	Years of Service, Inclusive.	Residence.
Arthur Watts.....	1846-52	Chillicothe.
J. P. Kirtland.....	1846-48	Cleveland.
A. E. Strickle.....	1846-49	Wilmington.
M. B. Bateham.....	1847-51	Columbus.
John Coddington.....	1847-49	Granger.
C. Springer.....	1848-52	Meadow Farm.
J. M. Edwards.....	1848-52	Canfield.
J. G. Gest.....	1848-54	Spring Valley.
F. R. Elliott.....	1849-51	Cleveland.
J. T. Pugsley.....	1850-51	Convenience.
S. Halloway.....	1850-51	St. Clairsville.
William Case.....	1852-53	Cleveland.
Philo Adams.....	1852-53	Huron.
R. W. Musgrave.....	1852-57	Sulphur Springs.
R. W. Steele.....	1853-56	Dayton.
William H. Ladd.....	1853-56	Richmond.
D. McIntosh.....	1853-54	Shalersville.
J. T. Worthington.....	1853-56	Chillicothe.
Joseph Sullivan.....	1854-55	Columbus.
John K. Greene.....	1854-57	Cincinnati.
James L. Cox.....	1854-55	Zanesville.
B. Stedman.....	1854-57	Cleveland.
Alexander Waddle.....	1855-60	South Charleston.
Abel Krum.....	1855-58	Cherry Valley.
Lucien Butties.....	1856-59	Columbus.
G. W. Baker.....	1856-57	Marietta.
John M. Milliken.....	1857-62	Hamilton.
Luther Smith.....	1857-58	West Liberty.
Thomas S. Webb.....	1857-58	Massillon.
Norton S. Townshend.....	1858-63	Avon.
L. Q. Rawson.....	1858-59	Fremont.
James M. Trimble.....	1858-61	Hillsboro.
John Reber.....	1858-61	Lancaster.
D. E. Gardner.....	1859-64	Toledo.
William Dewitt.....	1859-64	Cleveland.
C. W. Potwin.....	1859-62	Zanesville.
T. C. Jones.....	1860-67	Delaware.
Henry B. Perkins.....	1860-63	Warren.
David Taylor.....	1861-66	Columbus.
Jacob Egbert.....	1862-63	Lebanon.
Nelson J. Turney.....	1862-69	Circleville.
D. McMillan.....	1863-70	Xenia.
W. R. Putnam.....	1863-64	Marietta.
William F. Greer.....	1864-67	Painesville.
James Fullington.....	1864-69	Irwin Station.
William B. McClung.....	1864-71	Troy.
James W. Ross.....	1865-70	Perrysburg.
R. R. Donnelly.....	1865-68	Wooster.
James Buckingham.....	1865-72	Zanesville.
J. Park Alexander.....	1867-70	Akron.
Norton S. Townshend.....	1868-69	Avon.
William Lang.....	1868-71	Tiffin.
D. C. Richmond.....	1869-74	Sandusky.
R. P. Cannon.....	1870-75	Aurora.
James B. Jamison.....	1870-77	Cadiz.
L. G. Delano.....	1870-75	Chillicothe.
L. B. Sprague.....	1871-76	Springfield.
Simpson Harmount.....	1871-76	New Philadelphia.
John A. Warder.....	1871-76	Cleves.

## MEMBERS OF THE STATE BOARD OF AGRICULTURE.—Continued.

Names.	Years of Service, Inclusive.	Residence.
W. S. Hickox.....	1872-73	Mansfield.
B. W. Carlisle.....	1872-79	Hooker's Station.
Justus C. Stephens.....	1873-74	Kefton.
John M. Pugh.....	1874-79	Columbus.
L. B. Wing.....	1875-80	Newark.
Russell C. Thompson.....	1875-76	Sylvania.
Leo Weltz.....	1876-83	Wilmington.
D. L. Pope.....	1876-81	Welshfield.
Charles Smith.....	1877-80	Marion.
E. T. Stickney.....	1877-78	Republic.
A. E. Stone.....	1877-78	Gallipolis.
Peter Murphy.....	1877-80	Hughes' Station.
W. N. Cowden.....	1878-83	Quaker City.
R. Baker.....	1879-82	Elyria.
Arvine C. Wales.....	1879-82	Massillon.
R. H. Hayman.....	1880-81	Portsmouth.
O. P. Chaney.....	1880-82	Canal Winchester
C. D. Bailey.....	1881-88	Gallipolis.
J. C. Levering.....	1881-86	Levering.
William S. Foster.....	1881-88	Urbana.
L. B. Harris.....	1882-87	Upper Sandusky
J. H. Brigham.....	1882-89	Delta.
L. N. Bonham.....	1883-86	Oxford.
H. Talcott.....	1883-87	Jefferson.
N. A. Sims.....	1883-85	Columbus.
T. P. Shields.....	1884-87	Watkins.
John Pow.....	1884-89	Salem.
S. H. Hurst.....	1884-89	Chillicothe.
J. J. Sullivan.....	1887-88	Millersburg.
Joseph H. Terrell.....	1887-88	New Vienna.
J. G. Russell.....	1887-90	Mt. Gilead.
H. G. Tryon.....	1888-91	Willoughby.
J. M. Black.....	1888-91	Hanover (Fairmount W. Va.)
A. H. Kling.....	1889-96	Marion.
H. S. Grimes.....	1889-90	Portsmouth.
A. J. Clark.....	1889-98	Cambridge.
W. W. Miller.....	1889-94	Castalia.
J. W. Pollock.....	1890-93	Cedarville.
N. Ohmer.....	1890-95	Dayton.
L. G. Ely.....	1890-91	West Unity.
E. L. Hinman.....	1890-93	Columbus.
J. C. Bower.....	1891-98	Athens (Groveport.)
George Lewis.....	1891-94	Van Wert.
Chester Bordwell.....	1892-93	Batavia.
F. A. Derthick.....	1892-95	Mantua.
J. T. Robinson.....	1894-97	Rockaway.
G. Liggett.....	1894-1901	Watkins.
J. N. Pringle.....	1894-95	Cardington.
E. C. Ellis.....	1895-98	Crestvue.
Chester Bordwell.....	1895-1901	Batavia.
L. G. Ely.....	1896-1900	Fayette (West Unity)
H. S. Grimes.....	1896-1900	Portsmouth.
Albert Hale.....	1896-99	Mogadore.
J. S. Stuckey.....	1897-1903	Van Wert.
S. H. Ellis.....	1898-99	Waynesville
D. J. Green.....	1899-1902	Renrock.
B. P. Baldwin.....	1899-1903	Tiger.
Samuel Taylor.....	1899-1907	Grove City.

## LIST OF MEMBERS.

## MEMBERS OF THE STATE BOARD OF AGRICULTURE.—Concluded.

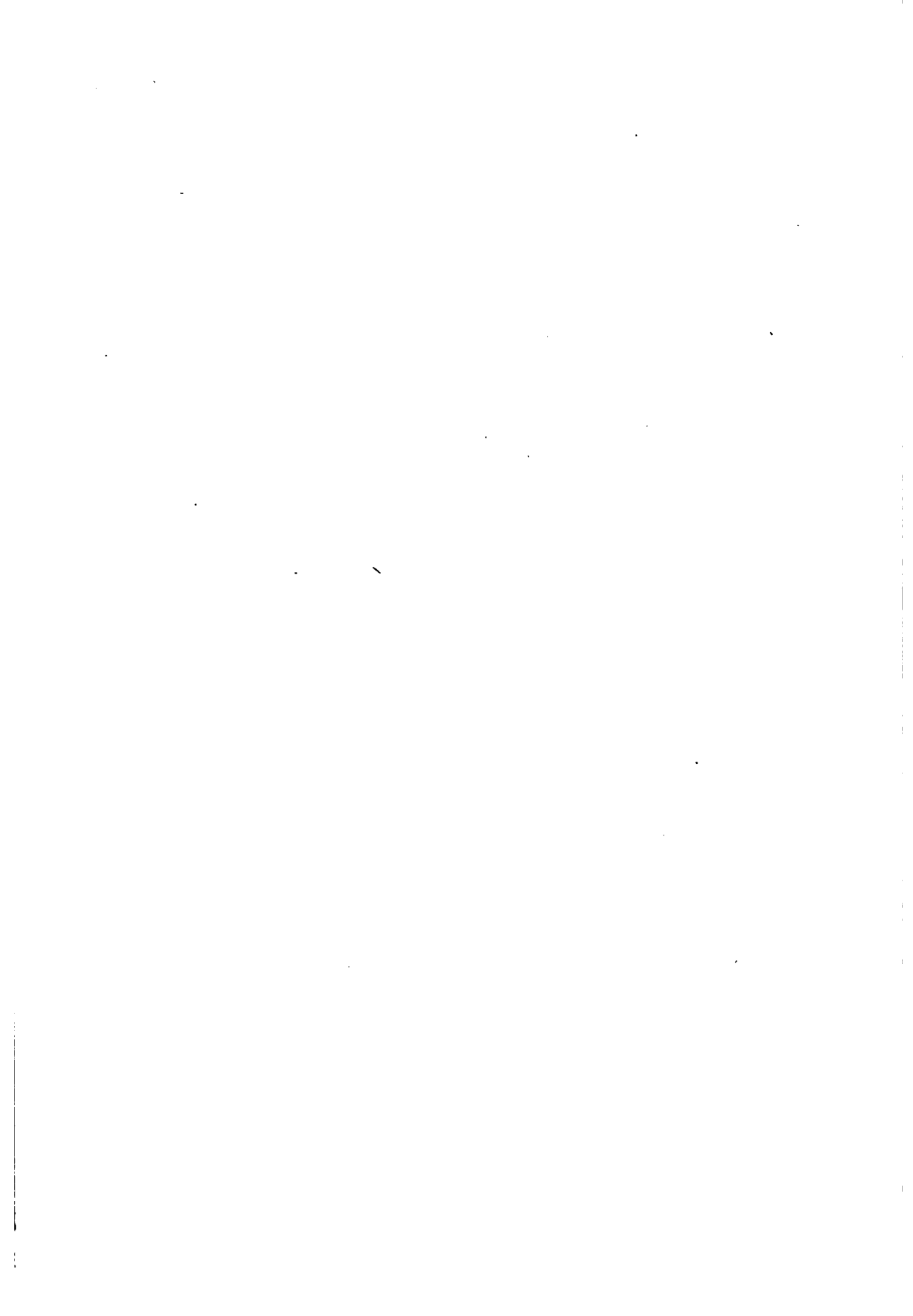
Names.	Years of Service, Inclusive.	Residence.
T. E. Cromley .....	1900	Ashville.
*T. L. Calvert .....	1900-1906	Selma.
Wm. Miller, .....	1901	Gypsum.
J. L. Carpenter .....	1901-1906	Carpenter.
C. H. Ganson .....	1902	Urbana.
*A. P. Sandles .....	1902-9	Ottawa.
R. O. Hinsdale .....	1903-1906	Wadsworth
*E. L. Lybarger .....	1904-1906	Spring Mountain.
L. P. Bailey .....	1904-9	Tacoma.
Dr. H. M. Brown .....	1906-9	Hillsboro.
C. W. McFarland .....	1906	Galion.
L. W. Kilgore .....	1907	London.
P. G. Ewart .....	1907	East Akron.
G. E. Jobe .....	1908	Cedarville.
Jacob Dean .....	1909	Chester.
J. A. Beidler .....	1909	Willoughby.
J. F. Cross .....	1909	Washington C. H.
E. L. Lybarger .....	1910	Warsaw.

\*Resigned.



LIST OF OFFICERS OF THE OHIO STATE BOARD OF AGRICULTURE  
FROM ITS ORGANIZATION TO DATE; ALSO TABLES SHOWING  
PLACE OF HOLDING AND RECEIPTS OF EACH FAIR.

Yr.	President.	Treasurer.	Secretary.	Place of Fair.	Receipts
1846	Allen Trimble	M. L. Sullivan	Samuel Medary	Cincinnati	
1847	Same	Same	M. B. Bateham	Columbus	
1848	Same	Same	Same		
1849	M. L. Sullivan	Samuel Medary	Same		
1850	Same	Same	Same		\$8,036 18
1851	Same	Same	W. W. Mather		8,204 09
1852	Arthur Watts	Same	Same	Cleveland	13,360 00
1853	Samuel Medary	M. L. Sullivan	Geo Sprague	Dayton	13,996 37
1854	R. W. Murgrave	Joseph Sullivan	Same	Newark	8,824 58
1855	J. T. Worthington	Same	Same	Columbus	9,745 54
1856	William H. Ladd	Lucien Buttles	Same	Cleveland	16,684 20
1857	Alexander Waddle	Same	J. H. Klippart	Cincinnati	17,530 75
1858	John M. Millikin	Same	Same	Sandusky	9,997 70
1859	N. S. Townshend	Same	Same	Zanesville	8,058 52
1860	Alexander Waddle	Chas. W. Potwin	Same	Dayton	11,998 10
1861	Darwin E. Gardner	Same	Same	Dayton	8,036 18
1862	Thomas C. Jones	David Taylor	Same	Cleveland	11,260 64
1863	N. S. Townshend	Same	Same	Cleveland	11,142 00
1864	Nelson J. Turney	Same	Same	Columbus	12,620 54
1865	Same	Same	Same	Columbus	10,658 65
1866	Wm. B. McIlung	Same	Same	Dayton	14,035 80
1867	Daniel McMillen	Jas. Buckingham	Same	Dayton	18,692 98
1868	James Fullington	Same	Same	Toledo	15,006 25
1869	Same	Same	Same	Toledo	19,606 50
1870	James W. Ross	J. Park Alexander	Same	Springfield	18,252 85
1871	William Lang	Jas. Buckingham	Same	Springfield	16,460 25
1872	James Buckingham	Simpson Harmount	Same	Mansfield	19,149 45
1873	Lincoln G. Delano	Same	Same	Mansfield	22,517 50
1874	Same	Same	Same	Columbus	27,674 79
1875	R. P. Cannon	Same	Same	Columbus	20,539 30
1876	S. Harmount	J. M. Pugh	Same	Columbus	11,909 61
1877	J. B. Jamison	Same	Same	Columbus	21,151 21
1878	J. M. Pugh	L. R. Wing	Same	Columbus	11,979 50
1879	B. W. Carlisle	Same	J. W. Fleming	Columbus	30,703 35
1880	L. B. Wing	D. L. Pope	W. I. Chamberlin	Columbus	23,682 20
1881	D. L. Pope	Leo. Welts	Same	Columbus	29,766 16
1882	R. Baker	W. N. Cowden	Same	Columbus	34,082 52
1883	W. N. Cowden	L. B. Harris	Same	Columbus	38,513 78
1884	W. S. Preter	Same	Same	Columbus	33,306 48
1885	C. D. Bailey	J. C. Levering	Same	Columbus	29,796 51
1886	L. N. Bonham	L. B. Harris	Same	Columbus	30,533 17
1887	J. H. Brigham	Same	L. N. Bonham	Columbus	30,902 10
1888	John Row	J. G. Russell	Same	Centennial year, no fair.	
1889	Same	Same	Same	Columbus	19,637 41
1890	J. G. Russell	A. H. Kling	Same	Columbus	27,574 55
1891	J. M. Black	Same	Same	Columbus	33,878 64
1892	A. H. Kling	W. W. Miller	Same	Columbus	30,357 19
1893	J. W. Pollock	Same	Same	Columbus	19,350 93
1894	W. W. Miller	F. A. Derthick	Same	Columbus	27,260 25
1895	A. J. Clark	Same	W. W. Miller	Columbus	33,966 13
1896	J. C. Bower	A. J. Clark	Same	Columbus	22,531 20
1897	J. T. Robinson	J. C. Bower	Same	Columbus	30,369 48
1898	C. Bortwell	Same	Same	Columbus	31,023 36
1899	L. G. Ely	H. S. Grimes	Same	Columbus	33,749 17
1900	H. S. Grimes	L. G. Ely	Same	Columbus	31,521 35
1901	J. S. Stuckey	G. Liggett	Same	Columbus	51,576 50
1902	Samuel Taylor	T. L. Calvert	Same	Columbus	40,519 72
1903	T. E. Cromley	Same	Same	Columbus	49,292 75
1904	J. L. Carpenter	Same	Same	Columbus	37,632 97
1905	William Miller	Same	Same	Columbus	59,084 48
1906	A. P. Sandles	Samuel Taylor	T. L. Calvert	Columbus	61,443 45
1907	L. P. Bailey	Same	Same	Columbus	80,761 40
1908	H. M. Brown	C. W. McFarland	Same	Columbus	65,223 40
1909	L. W. Kilgore	Same	A. P. Sandles	Columbus	87,080 69



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# TRANSACTIONS

OF THE

## Ohio State Board of Agriculture

### For Year 1909

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DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, January 26, 1909.

The Ohio State Board of Agriculture met at three o'clock p. m., and the following members answered to roll-call: Messrs. Cromley, Kilgore, Miller, McFarland, Ganson, Sandles, Ewart and Jobe. Governor Harmon having removed President Brown and Mr. Bailey from the Board, Vice-president Cromley presided.

The minutes of the preceding meeting were read and approved.

The secretary stated that he had received a communication from J. H. McClain, with reference to payment of bill for repairs and remodeling office during the year 1905. Mr. Ewart moved that the board rescind its former action in this matter and that the secretary be instructed to make settlement with Mr. McClain. The motion was adopted.

The secretary presented and read a communication from Miss Daisy Cherry, with reference to payment for services performed in connection with the 1905 exposition. On motion the secretary was instructed to correspond with Mrs. N. T. Connell, assistant superintendent, Portsmouth, Ohio, and ascertain the number of days Miss Cherry was employed in the office during the year 1905.

The secretary stated that the Ohio State University contemplated holding a poultry exhibition in the near future, and desired to borrow poultry coops from fair grounds for said exhibition, and further requested that the Board assign at its expense two of its lecturers to address this meeting on the subject of poultry raising. On motion of Mr. Sandles it was agreed that these requests be granted.

At four o'clock p. m., on motion of Mr. Jobe, the Board recessed until 4:30 o'clock p. m., at which hour it met for the purpose of organization.

Mr. Jesse F. Cross, of Fayette county, and Mr. Jacob A. Beidler, of

Lake county, having been appointed by the governor to fill the unexpired terms of Messrs. L. P. Bailey and H. M. Brown, presented their credentials and were seated as members of the Board.

The chair announced that the next in order would be the election of officers for the ensuing year; whereupon Mr. Ganson nominated L. W. Kilgore for president and moved that the rules be suspended and the secretary be instructed to cast the vote of the entire Board for Mr. Kilgore. The motion was carried and the secretary cast the ballot as instructed, whereupon Mr. Kilgore was declared the duly elected president of the Board.

Mr. Beidler nominated Mr. C. H. Ganson for vice-president; Mr. McFarland presented the name of Mr. William Miller. A ballot of ten votes was taken, of which number Mr. Miller received seven and Mr. Ganson three. Mr. Ganson moved that the election of Mr. Miller be made unanimous. The motion prevailed.

Mr. Miller presented the name of T. L. Calvert for secretary, and Mr. Kilgore nominated A. P. Sandles for that office. Other nominations were called for, and no names being presented, Mr. Beidler moved that nominations for secretary be closed. The motion was adopted, and the ballot was cast for secretary, Mr. Sandles requesting to be excused from voting. The ballot resulted as follows: Mr. Calvert, three votes; Mr. Sandles, six votes; whereupon Mr. Jobe moved that the election of Mr. Sandles be made unanimous, and the motion prevailing, Mr. Sandles was declared the duly elected secretary of the Board.

Mr. Ganson placed in nomination the name of James W. Fleming for assistant secretary. No other nominations being presented, a ballot was taken, and Mr. Fleming, receiving the entire ten votes, was declared unanimously elected.

Mr. Kilgore nominated C. W. McFarland for treasurer. Mr. Ganson moved that the rules be suspended and the secretary be instructed to cast the vote of the entire Board for Mr. McFarland. The motion was carried and the secretary cast the ballot as instructed, whereupon Mr. McFarland was declared the duly elected treasurer of the Board.

Mr. Jobe moved that the salaries of the newly elected officers be the same as their predecessors. The motion was adopted.

On recommendation of Mr. Sandles, Mr. Kilgore moved that E. J. Filbin be appointed chief clerk and R. H. Ramsdell, fertilizer inspector, their salaries to be fixed at the next meeting of the Board. The motion prevailed.

Mr. Ganson moved that Cora Dale, Hannah Jones and Ora Ayres be employed as stenographers, their salaries to be \$1,000, \$900 and \$720 per annum, respectively. The motion was adopted.

Mr. Miller moved that Mr. N. E. Shaw be appointed Chief Inspector of the Division of Nursery and Orchard Inspection, at a salary of \$1,800 per annum. The motion was carried unanimously.

Mr. Miller moved that the selection of deputy inspectors in the Division of Nursery and Orchard Inspection, and the salaries of same, be adjusted at the next meeting of the Board. The motion was adopted.

Mr. Beidler moved that further selections for subordinate positions be postponed until the next meeting of the Board. The motion prevailed.

Mr. McFarland moved that the secretary and assistant secretary be required to furnish surety bonds of \$20,000 and \$10,000 respectively, the expense of same to be paid by the Board. The motion was unanimously adopted.

At 5:30 o'clock p. m., on motion of Mr. Beidler, the Board adjourned to meet Wednesday, February 3, 1909, at 10 o'clock a. m.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, February 3, 1909.

The Ohio State Board of Agriculture met at ten o'clock a. m., with President Kilgore in the chair and all members present.

The minutes of the preceding meeting were read and approved.

The matter of appointments to subordinate positions in the Department was considered, and upon recommendation of the secretary, Mr. Cromley moved that I. N. Stroud be appointed janitor and messenger at a salary of \$840 per annum. On roll-call the motion was unanimously adopted.

Mr. Sandles recommended Lewis Venneman for the position of superintendent of the state fair grounds, and Mr. Jobe moved that Mr. Venneman be employed as said superintendent for the ensuing year, at a salary of \$840. On roll-call the motion was unanimously adopted.

Mr. Jobe moved that the superintendent of the fair grounds be required to file at once with the secretary an inventory of all state property now in his care and possession. The motion prevailed.

Mr. Cromley moved that the matter of salaries of deputy inspectors of the Nursery and Orchard Division, and the securing of an increased appropriation for that Division be referred to the secretary, chief of division and Mr. Miller, to be reported upon at the next meeting of the Board. The motion was carried.

On recommendation of Mr. Sandles, Mr. Miller moved that Mr. T. L. Calvert be employed as an inspector of fertilizers and feed stuffs, during spring and fall seasons, and that Mr. H. F. Fricke be appointed clerk and deputy inspector. On roll-call the motion was unanimously adopted.

Mr. Cromley moved that Mr. Fricke's salary be \$1,200 per annum. Mr. Miller moved to amend by making said salary \$1,000 per annum. The amendment was seconded by Mr. McFarland, and on roll-call was adopted.

Mr. Ganson moved to reconsider the matter of Mr. Fricke's salary.

On roll-call the motion was adopted, whereupon Mr. Cromley moved that Mr. Fricke's salary be made \$1,100 per annum. The motion was seconded by Mr. Ewart, and on roll-call was adopted, and Mr. Fricke was employed as clerk and deputy inspector at a salary of \$1,100 per annum.

Mr. Cromley moved that the president, secretary and a member of the Board to be designated by the president, comprise the building committee for the ensuing year. Mr. Ganson moved to amend by eliminating the word "building" and inserting in its stead the word "executive," and further that the membership of the committee be composed of the president, secretary and three members of the Board, to be appointed by the president. The motion as amended was adopted.

Mr. Cromley moved that the president and secretary be authorized to enter into contract with Mr. J. S. Roof for the erection of steel fencing across south side of fair grounds. The motion prevailed.

The secretary presented and read a communication from Mrs. N. T. Connell, assistant superintendent of the woman's building, relative to claim of Miss Daisy Cherry for services rendered in connection with the state fair of 1905. Mr. Ewart moved that Miss Cherry's claim be rejected. The motion prevailed.

Mr. McFarland moved that the secretary be empowered to secure a portrait of the retiring secretary, Mr. T. L. Calvert, to be hung upon the walls of the office. The motion was unanimously adopted.

At 12:20 o'clock p. m., on motion of Mr. Ganson, the Board recessed until two o'clock p. m., at which hour it reconvened and proceeded to the transaction of business.

The secretary reported that the surety bonds of himself and the assistant secretary, in the sums of \$20,000 and \$10,000, respectively, were properly executed. Mr. Ganson moved that the bonds be accepted. The motion was unanimously adopted and said bonds were placed in the hands of the treasurer of the Board, Mr. McFarland.

The secretary stated that the Smith Agricultural Chemical Company had made application for license to sell and offer for sale in Ohio during the current year, 55 brands of commercial fertilizers, under and subject to the provisions of the Revised Statutes of Ohio, enclosing check for \$1,100 in payment of same. While no action was taken in the matter, it was the sense of the Board that the secretary submit same to the attorney general before issuing license.

At 2:30 o'clock p. m., on motion of Mr. Ganson, the Board recessed until ten o'clock a. m., Thursday, February 4, for the purpose of conferring with state fair managers present, relative to adopting uniformity in the business affairs of these various expositions.

At twelve o'clock m., on motion, the Board adjourned to meet on call of the president.



DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, March 17, 1909.

On call of President Kilgore the Ohio State Board of Agriculture met at 1:30 o'clock p. m., with all members present, Mr. Kilgore presiding.

The secretary read the minutes of the preceding meeting and they were approved.

Mr. Hamilton, representing Hunt, Helm, Ferris & Co., manufacturers of hay tools, etc., appeared before the Board and submitted propositions relative to installing litter conveyances in the horse and cattle barns on state fair grounds. On motion of Mr. Cromley it was agreed that action in the matter be deferred for the present.

Messrs. Johnson, Ross & Hull, representing the Ohio Shorthorn Breeders' Association, appeared before the Board for the purpose of securing such increase in Shorthorn premiums that the full amount of special premiums offered by the American Shorthorn Breeders' Association be available at the 1909 state fair.

Mr. Harry G. Holbrook, architect for the Board, made verbal report of contemplated improvements on state fair grounds, and suggestions relative to establishing a grade line on 11th avenue. On motion of Mr. Ewart, Mr. Holbrook was instructed to request the Columbus Board of Public Service to establish said grade line.

Mr. Ed. Clever, Bloomingburg, Ohio, appeared before the Board relative to revision of swine classifications at the forthcoming Ohio state fair.

Mr. N. E. Shaw, Chief Inspector of the Division of Nursery and Orchard Inspection, made report of the work accomplished by said division since the last meeting of the Board. He stated that on account of the appearance of the brown tailed moth in the state his division had been so taxed in dealing with this pest that other work was necessarily neglected, and to meet this exigency it would be necessary to employ an additional inspector for the coming season.

Mr. Cromley moved that the matter of securing postal rate concessions on crop and other bulletins issued by the Department be referred to the secretary and Mr. Beidler. The motion prevailed.

After thoroughly discussing the matter of appointing police for the 1909 exposition, Mr. Ewart moved that the number of said officers be limited to seventy, their compensation to be three dollars per day, and further, that each member of the Board be authorized to recommend six men to the chief of police for appointment. The motion was adopted.

Mr. Alburn, special counsel of the attorney general's department, appeared before the Board and discussed proposed prosecutions for violation of the fertilizer and feed stuffs laws.

At six o'clock p. m., on motion of Mr. Ganson, the Board recessed until seven o'clock p. m.

At the expiration of the recess the Board proceeded to the transaction of business.

On motion of Mr. Cromley it was agreed that it was not advisable at this time to equip the horse and cattle buildings with litter carriers.

Mr. Cross moved that the ticket and admission system now in vogue at the Tennessee state fair be adopted by this Board for the 1909 exposition. The motion was unanimously adopted.

Mr. Beidler moved that the secretary be instructed to invite propositions relative to installing new turnstiles and entrances on the state fair grounds. The motion was adopted.

Mr. Miller moved that the secretary be instructed to confer with the state railway commission relative to securing concessions in passenger railway rates for the coming state fair. The motion was adopted.

Mr. Ewart moved that twenty branch stands, size 6x6 feet, be constructed on the state fair grounds under the supervision of Superintendent Venneman. On roll-call the motion was unanimously adopted.

Mr. Ganson moved that the secretary be authorized and instructed to issue voucher, amount \$25, in payment of Ohio state fair dues in American Association of Fairs and Expositions. On roll-call the motion was adopted.

On motion of Mr. Cromley it was agreed that an additional water plug be placed immediately north of the center doorway of the cattle building.

Mr. Ganson moved that the secretary be authorized and instructed to expend such sum as is necessary to replat state fair grounds, showing locations of water, sewer and gas mains, pipes and taps. On roll-call the motion was adopted.

On motion of Mr. Beidler the secretary was instructed to extend an invitation to the State Grange to meet in annual reunion on the state fair grounds, Wednesday and Thursday, September 1 and 2, next.

On Mr. Beider's motion it was agreed that the secretary be authorized to extend all courtesies of the exposition to present farmers' institute officers.

On motion of Mr. Jobe it was agreed that the date for closing entries at the forthcoming exposition be Saturday, August 14.

On motion of Mr. Cross the Board recessed until nine o'clock a. m., Thursday, March 18, at which hour it reconvened and proceeded to the transaction of business.

The matter of night entertainments was discussed, and Mr. J. C. McMaster, representing the McMaster Electrical Company, gave an outline of plans and cost of installing electric lighting system. After hearing his remarks the matter was taken under advisement.

Mr. Ganson moved that the assignment of stalls and pens in the live stock departments be in charge of the secretaries and superintendents. The motion was adopted.

Mr. Ewart moved that on Monday, August 30, ladies be admitted free to the exposition, and that said day be designated as Women's Free Day. On roll-call the motion was adopted.

The president announced that the next order of business would be the revision of the premium list for the 1909 exposition.

Mr. Ganson moved that the revision of classifications and premiums in the live stock and poultry departments be left in the hands of the members in charge and secretaries, with the proviso that no considerable increase in premiums be made. The motion prevailed.

Mr. Beidler moved that a herdsman's prize of \$50, to be divided into four moneys, be awarded to herdsmen showing best condition of stalls and alleyways in the cattle building, said awards to be made under the supervision of the member in charge. On roll-call the motion was adopted.

Mr. Miller moved that the premiums in the 6th department be increased so that they in the aggregate amount to \$3,500. On roll-call the motion was adopted.

Mr. Miller moved that premiums in the floral department be increased \$500 over the amount offered in 1908. On roll-call the motion was unanimously adopted.

Mr. Jobe moved that the revision of the woman's and art departments be left in the hands of the member in charge and secretaries, and that they be privileged to increase said premiums not to exceed \$500 over the amount offered in 1908. On roll-call the motion was unanimously adopted.

Mr. Cromley moved that eight prizes be offered for the best acre of corn grown in Ohio, the rules and regulations governing said contest to be formulated by Mr. Miller and the secretaries; and further that said prizes be apportioned as follows: First, \$100; 2nd, \$80; 3rd, \$60; 4th, \$50; 5th, \$40; 6th, \$30; 7th, \$20; 8th, \$10. On roll-call the motion was unanimously adopted.

Messrs. J. W. Hills, Delaware; Charles Davis, Radnor, and C. A. Shurtz, Gaysport, a committee representing the Ohio Swine Breeders' Association, appeared before the Board and requested that the classification for Hampshire swine be the same as for other leading breeds.

At 12:30 o'clock p. m., on motion of Mr. Cromley, the Board recessed until 1:30 o'clock p. m.

1.30 o'clock, p. m.

Pursuant to recess the Board reconvened.

The matter of inaugurating students' live stock judging contests was discussed, and after hearing Professor Marshall, O. S. U., and C. W.

Smith, president of the Agricultural Students' Shortcourse Association, Mr. Cromley moved that the Board appropriate \$200 for judging contests, of which sum one-half to be awarded to students in the two and four year courses, and a similar sum to be awarded to the short course students and farmers' sons not attending agricultural colleges. The motion prevailed.

Professor Plumb, O. S. U., requested that premiums in the four classes of Merino sheep be increased, and on his suggestion that the Board install an exhibit of wools, Mr. Jobe moved that \$100 be appropriated for this latter purpose, said sum to be awarded in four premiums, the details of the contest to be formulated by Professor Plumb. On roll-call the motion was adopted.

Mr. Beidler moved that the premium offers on fat cattle be increased \$120. On roll-call the motion was adopted.

Mr. Cromley moved that the sum of \$1,000 be appropriated for special attractions, and that the matter of contracting for same be referred to the president and secretaries. On roll-call the motion was carried.

Mr. John Weber appeared before the Board, relative to contracting for an engagement of his band during the forthcoming exposition. On motion of Mr. McFarland this matter was indefinitely postponed.

At 4:30 o'clock p. m., on motion of Mr. Cross, the Board adjourned to meet on call of the president.

COLUMBUS, OHIO, April 12, 1909.

At 1:30 o'clock p. m. the Ohio State Board of Agriculture met in the hearing room of the State Railway Commission in conference with representatives of the Columbus Board of Trade, city and railway officials and the State Railway Commission, for the purpose of discussing the matter of reduced railway rates for the coming Ohio state fair. After a thorough discussion of same at five o'clock p. m., the Board recessed until nine o'clock a. m., Tuesday, April 13, at which hour it proceeded in a body to the state fair grounds. An inspection of the grounds and buildings was made, and at twelve o'clock m. the members returned to the offices of the Department. On motion a recess was taken until one o'clock p. m.

At the expiration of the recess the Board reconvened, with President Kilgore in the chair. On roll-call all members responded except Mr. Ewart.

Mr. Jacob Dean, of Chester, Meigs county, having been appointed by Governor Harmon as a member of the Board to fill the vacancy and unexpired term ending February 1, 1912, caused by the resignation of A. P. Sandles, presented his credentials. The oath of office was administered and he was seated as member of the Board.

The minutes of the previous meeting were read and approved.

By common consent it was agreed that the following be incorporated in the rules governing the acre corn contest inaugurated by the Board: The crop to be ear corn; quality, merchantable No. 2, and the dates of husking to be November 1 to 15. One hundred pounds of said ear corn to be shelled and weighed, and this amount and weight to serve as a basis for estimating the total amount of shelled corn in acre. In each county of the state having an entrant in the contest, the county commissioners of said county shall designate three citizens of said county to measure ground, husk and weigh the corn and certify result. All awards in the contest to be made during the annual meeting of the State Board of Agriculture, in Columbus, January next.

Mr. Alburn, special counsel of the attorney general's department, Professor N. W. Lord, O. S. U., and Director C. E. Thorne, of the Ohio Agricultural Experiment Station, were heard relative to the status of the present commercial fertilizer law.

Mr. Bright, Cleveland, Ohio, appeared before the Board and gave a practical demonstration of the feasibility of coin operating turnstiles. The matter of installing these machines on the state fair grounds was discussed, and President Kilgore requested that Mr. Bright submit to the secretary a written proposition as to the cost of installing this system.

The secretary presented and read a proposition from Windhorst & Co., St. Louis, Mo., relative to lighting state fair grounds five consecutive nights during the coming Ohio State Fair. Action on the matter was deferred for the present.

Mr. Ganson moved that the amount of premiums to be offered at the 1909 exposition on Jersey and Holstein cattle be equal to the amount offered for the leading beef breeds at the 1908 exposition. On roll-call the motion was adopted.

Mr. McFarland moved that the amount of premiums on Shorthorn cattle at the coming exhibition aggregate \$800. On roll-call the motion was unanimously adopted.

Mr. McFarland moved that the building committee be authorized and instructed to equip the new woman's building with necessary show cases. On roll-call the motion was unanimously adopted.

Mr. Jobe moved that the revision of premiums and classifications in the horse department, as presented by Mr. Ganson, be approved.

On roll-call the motion prevailed.

Mr. Beidler moved that the revision of premiums and classifications in the swine department, as presented by Mr. Cross, be approved. On roll-call the motion was unanimously adopted.

Mr. McFarland moved that the revision of premiums and classifications in the sheep, poultry, women's and art departments, as presented

by the members in charge of these various departments, be approved. On roll-call the motion was carried.

The secretary presented and read proposition relative to installing coin system turnstiles, whereupon Mr. Cromley moved that Mr. Beidler and the secretary be authorized and instructed to further investigate the matter of purchasing these coin boxes, and to make report of same at the next Board meeting. On roll-call the motion was adopted.

The secretary presented and read opinions received from the attorney general of the state, as follows:

Columbus, Ohio; April 2, 1909.

HON. A. P. SANDLES, Secretary The Ohio State Board of Agriculture, Columbus, Ohio.

Dear Sir:—In your letter of April 1st you inquire whether, under section 4211-13 of Bates' Revised Statutes, members of the board of live stock commissioners may receive the compensation provided in that section for attending meetings and performing duties imposed upon such board.

Section 4211-13 provides that:

"Each member of said board shall receive for his services the sum of three dollars per day and necessary traveling expenses for each day he is actually engaged in the investigation and eradication of diseases of domestic animals by the direction of the board."

It is to be noted that the compensation provided in this section is to be paid to the particular members of the board who are "actually engaged in the investigation and eradication of diseases of domestic animals" and that they are to be paid only when working "by the direction of the board."

I am of the opinion, therefore, that members of such board may not receive the compensation provided in the above quoted section for attending meetings and performing duties while not engaged in the investigation and eradication of diseases of domestic animals.

You also ask for an interpretation of the act of 99 O. L. 592a relating to the handling of funds and the rendering of statements as to the Ohio State Fair.

Section 2 of this act provides that:

"The board shall file a verified, itemized, quarterly statement of all its receipts and expenditures from every source on the first day of January, April, July and October, with the auditor of state. All disbursements made shall be by itemized vouchers upon the auditor of state, and all receipts shall be deposited with the treasurer of state in the same manner as is now required of all other officers, boards and commissions of the state."

Section 3691-25, as amended by this act, provides that:

"Whenever it becomes necessary to pay out premiums and the expenses of conducting a state agricultural exhibition, the board may retain from its receipts a sufficient sum therefor, and pay such premiums and such expenses therefrom on vouchers of the secretary and shall thereafter immediately certify the balances in its hands into the

state treasury, rendering an account of such premium payments, and the expenses of conducting such agricultural exhibition, as provided in section 2 hereof."

From a reading of the above provisions it is evidently the intention of the general assembly that receipts of the board in connection with the Ohio State Fair need not be turned into the treasury but may be kept by the board as a separate fund from which the expenses of such fair shall be paid on vouchers of the secretary of the board, the balance remaining at the close of the state fair to be certified into the state treasury.

I am further of the opinion that the verified, itemized statement to be made in regard to the receipts and expenses of the state fair is not to be made quarterly, but is to be made as a part of the first quarterly statement following the close of the state fair. The use of the word "thereafter" in the above quoted provisions of section 3691-25 leads me to this conclusion.

Very truly yours,

(Sgd) U. G. DENMAN,  
Attorney General.

Mr. Dean moved that the secretary be instructed to extend an invitation to the Wright Bros., Dayton, Ohio, to exhibit their aeroplane at the coming Ohio State Fair, and make report of same at the next meeting of the Board. The motion was adopted.

On motion of Mr. McFarland, the secretary was instructed to extend an invitation to President Taft to honor with his presence the coming Ohio State Fair.

The secretary presented and read a communication from the Columbus Board of Public Service, relative to establishing grade line on Eleventh avenue.

At 7:30 o'clock p. m., on motion of Mr. Cromley, the Board adjourned to meet on call of the president.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, June 15, 1909.

The Ohio State Board of Agriculture met at ten o'clock a. m., with President Kilgore in the chair. On roll-call all members responded except Mr. Ewart.

The minutes of the previous meeting were read and approved.

Mr. G. T. Lehman, representing Parke, Davis & Co., Detroit, Mich., appeared before the Board relative to securing contract for disinfecting grounds and buildings during the continuance of the coming exposition. On motion of Mr. Ganson, the matter was referred to the president and secretaries.

The Board then heard several gentlemen, including F. P. Spellman, J. P. Bowers and C. H. Plummer, with reference to furnishing amusement features at the coming Ohio State Fair. Mr. Spellman also offered the sum of \$2,500 for the exclusive show privilege.

At 12:30 o'clock, on motion of Mr. Miller, the Board recessed until 1:30 o'clock, at which hour it resumed its session.

Mr. Ganson moved that \$500 additional be appropriated for free attractions. On roll-call the motion was unanimously adopted.

Mr. F. C. Persons was heard regarding a kennel exhibition in connection with the state fair.

Mr. Cromley moved that the secretary, Mr. Beidler and Mr. McFarland be authorized to contract for necessary coin boxes. On roll-call the motion was unanimously adopted.

Mr. Cromley moved that at the 1909 exposition the gates be open until 11 o'clock p. m., on August 30, 31, September 1 and 2, with complete exhibitions in all departments except live stock. The motion was unanimously adopted.

The secretary presented the matter of properly lighting the grounds for night exhibitions, whereupon Mr. Cross moved that said secretary be authorized to contract on the best possible terms for the lighting of the grounds and buildings. The motion was adopted.

Mr. Beidler moved that Mr. Spellman's proposition of \$2,500 for the exclusive show privilege be accepted. The motion was adopted.

Mr. Spellman submitted program of free attractions, which he offered for the sum of \$1,500.

Mr. Miller moved that permission be granted the American Kennel Club for an exhibition during the continuance of the state fair on the following terms:

That all people connected therewith pay gate admissions; that no catalogues, score cards or advertising matter be issued in conflict with other contracts or rules made by the Board, and that for this privilege they pay the sum of \$100 on or before the first day of the fair; and further, that the Ohio State Board of Agriculture shall not be held responsible for any liabilities incurred by said kennel club. The motion was duly seconded, and on roll-call was unanimously adopted.

Mr. William A. Burke appeared before the Board and requested the loan of 2,500 chairs for use during the Colored Baptist National Convention at the Goodale Street Auditorium, September 15-20.

The secretary stated that request had been made for permission to hold on the state fair grounds a barbecue in honor of Governor Harmon soon after the state fair. Mr. Ganson moved that the request be granted and the motion was unanimously adopted.

At 4:45 o'clock p. m. a recess was taken and the Board went into session as the Board of Live Stock Commissioners. At 5:30 o'clock p. m. it reconvened and proceeded to the transaction of business.

The matter of appointing a chief of police at the coming state fair was discussed, and Mr. Cromley moved that R. R. Grieve be selected as



chief and Dan McManamy as captain of police. On roll-call the motion was unanimously adopted.

The secretary stated that Hon. C. E. Thorne, Director of the Agricultural Experiment Station, Wooster, Ohio, had extended an invitation to the Board to visit the station Wheat Field Day, Tuesday, June 22. Mr. McFarland moved that the invitation be accepted. The motion was unanimously adopted.

Mr. Beidler moved that the president and secretary be authorized to sign petition for the paving of 11th avenue east of Big Four tracks. The motion was adopted.

Mr. Dean moved that an invitation be extended to all ex-members of the Board to meet in reunion during the coming state fair. The motion was carried.

Mr. Cromley moved that the sum of \$300 be offered for best drilled fraternal organizations, above amount to be awarded as follows:

Best drilled company.....	\$200
Second best drilled company.....	100

On roll-call the motion was recorded as being unanimously adopted.

Mr. Miller moved that Tuesday, August 31, be known as "Press Day" at the coming Ohio State Fair. The motion was carried.

Mr. Miller moved that there be extended to all members of the legislature an invitation to visit the state fair. The motion was adopted.

The secretary presented the application of Mr. John C. Calhoun for superintendent of state fair grounds. On motion of Mr. Cross said application was placed on file.

At 6.30 o'clock p. m., on motion of Mr. Beidler, the Board recessed until 9 o'clock a. m., June 16.

June 16, 1909.

The Board resumed its session at nine o'clock a. m., with Vice-president Miller presiding.

Propositions from the F. & R. Lazarus & Co., relative to show cases for women's building, were read, whereupon Mr. Cromley moved that said propositions dated June 5 and 12, covering certain show cases, be accepted, with the proviso that the Board secure possession of same by August 15 next. The motion was duly seconded by Mr. McFarland, and on roll-call was unanimously adopted.

Mr. McFarland moved that the building committee be authorized to purchase such additional show cases for above named building as may be necessary. On roll-call the motion was unanimously adopted.

The secretary presented and read agreement between Mr. Spellman and the State Board, with reference to free feature attractions. Mr. Cross moved that said contract be ratified. The motion was adopted.

The secretary presented and read agreement entered into between Mr. Spellman and the State Board relative to exclusive show privilege at the coming exposition. On motion of Mr. Dean said contract was ratified.

Mr. F. A. Alexander, representing the W. A. Snider estate, appeared before the Board relative to feed and forage concession at the coming Ohio State Fair. Mr. Alexander agreed that in lieu of no charge being made for this concession he would furnish feed to exhibitors at current market prices, and further, for the convenience of exhibitors, a full supply of feed would be stored on the fair grounds during the entire week of the fair. On motion of Mr. Cromley, Mr. Alexander's proposition was accepted.

At ten o'clock a. m., on motion of Mr. Beidler, the Board adjourned to meet on call of the president.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, July 13, 1909.

The Ohio State Board of Agriculture met at 12 o'clock m., President Kilgore in the chair. On roll-call all members responded.

The minutes of the preceding meeting were read and approved.

Mr. A. C. Richards, representing the Capitol Construction Co., of Columbus, appeared before the Board with a proposition to make roads and walks on state fair grounds water and dustproof with a treatment of carbo-via. On motion of Mr. Cromley the matter was referred to the building committee, with power to act.

Mr. Miller moved that it is the sense of the Board that no cattle sales be allowed on state fair grounds until said cattle are subjected to the tuberculin test and found free from tuberculosis. On roll-call the motion was unanimously adopted.

At one o'clock p. m., on motion of Mr. Miller, the Board recessed until two o'clock p. m., at which hour it resumed its session.

The secretary reported that in pursuance to instructions and authority given him by the Board at meeting of June 15th, he had entered into and executed a contract with Windhorst & Company, of St. Louis, Mo., for lighting state fair grounds four evenings during the coming state fair for the sum of \$1,750, and that bond in the sum of \$500 had been given by said company as a guarantee of faithful performance of said contract.

The secretary reported that the American Kennel Club had advised that it would not accept the terms prescribed by the Board at a previous meeting for the giving of a dog show on state fair grounds during the fair.

The secretary also reported that in pursuance to instructions from

the Board, show cases had been purchased of the F. & R. Lazarus & Company, Columbus, Ohio, to the amount of \$1,620.

Mr. W. C. Gear, representing the Knonita Mfg. Company, was heard relative to securing for his company the disinfecting of grounds and buildings during the continuance of the state fair. The secretary was instructed to accept the lowest and best proposition for disinfecting.

Mr. W. A. Sands, manager of the Fourth Regiment Band, appeared before the Board with a proposition to furnish music at the coming fair.

Mr. F. P. Spellman appeared with a proposition to furnish music by Kopp's concert band. After a thorough discussion of the matter, Mr. Cromley moved that the Board employ concert or regimental bands. The motion was carried.

On motion of Mr. Ganson the secretary was authorized to contract for such music as is necessary.

The secretary stated that he had received the following proposition from M. W. Savage, owner of Dan Patch and Minor Heir: Mr. Savage advises that he will give an exhibition mile on the state fair grounds, Tuesday, August 31, 1909, between Dan Patch and Minor Heir upon condition that the Board pay him 65 per cent. of all gate receipts collected up to five p. m. on said day, in excess of the average gate receipts of Tuesday, 1907 and 1908.

Mr. Ewart moved that the proposition be accepted. On roll-call the motion was adopted and the secretary authorized to execute contract.

Messrs. J. Y. Bassell, W. G. Benham and W. D. McKinney, of the Columbus Board of Trade, appeared before the Board and asked permission to use state fair grounds for the purpose of holding a Columbus Industrial Exposition one week during October, 1909. Mr. Bassell stated that his board would enter into contract with the Board of Agriculture, giving bond to leave grounds and buildings in as good condition as before the holding of said industrial exposition.

Mr. Miller offered the following resolution:

"Resolved: That the request of the Columbus Board of Trade for the use of the state fair grounds and buildings thereon, for the purpose of holding an industrial exposition in October or November, be granted, providing said Board of Trade inaugurate and promote, to the satisfaction of the State Board of Agriculture, 'Columbus Day' during the week of the state fair; said Board of Trade to do all things reasonable to induce the merchants and citizens of Columbus to join in making such a day one of the banner days of the state fair in point of attendance."

Upon call of the members the vote was recorded as being unanimous in the adoption of said resolution.

Mr. Jobe moved that the Board purchase 28 coin boxes and 26 turnstiles of the H. V. Bright Co., Cleveland, Ohio, for the coming fair, at

price made to secretary of \$65 each for coin boxes and \$50 each for turnstiles. The motion was duly seconded by Mr. Dean, and on roll-call was unanimously adopted.

Mr. W. P. Conlin, representing the National Ticket Co., Cleveland Ohio, gave a demonstration of a combined coin box and ticket receiver, manufactured by above named firm.

Mr. Ewart moved that the Board purchase five coin boxes from the National Ticket Company, at its price of \$100. On roll-call the motion was unanimously adopted.

On motion of Mr. Jobe, the secretary was authorized to dispose of the old turnstiles to the best possible advantage.

Mr. McFarland moved that the building committee be authorized to make the necessary changes on fair grounds for the establishment of the new coin system. The motion was carried.

Mr. Cromley moved that a sum not to exceed \$600 be appropriated for the purchase of fireworks during the fair. On roll-call the motion was adopted.

On motion of Mr. Cromley, the secretary and Mr. McFarland were appointed delegates to attend the National Association of Farmers' Institute Workers, at Portland, Oregon, August 16-17 next.

There being no further business before the Board, at 6:30 o'clock p. m., on motion of Mr. Cross, it adjourned to meet at the call of the president.

ADMINISTRATION BUILDING,  
STATE FAIR GROUNDS, August 27, 1909.

On call of President Kilgore the Ohio State Board of Agriculture met at two o'clock p. m. On roll-call all members responded except Mr. McFarland.

The minutes of the preceding meeting were read and approved.

Mr. Thomas Johnson appeared before the Board and requested permission to remove part of his Shorthorn herd on Thursday, September 2, at four p. m. Mr. Johnson stated that these cattle were entered at the Hamline, Minn., fair, and this early release would be necessary in order to reach above named point in time for exhibition. Mr. Ganson moved that the request of Mr. Johnson be referred to the member in charge of the cattle department, with the suggestion that, if possible, it be granted. The motion was adopted.

The secretary stated that he had corresponded with 31 different bands relative to furnishing music at the fair, and after careful consideration he contracted with Kopp's Military Band, of Cincinnati, for the sum of \$1,000. This organization consists of 35 first-class musicians and a lady vocalist.

The secretary reported that the Board of Trade was making good its promise to make a success of Columbus Day at the fair. He also

reported that turnstiles had been purchased and were being installed; that the Pain Pyro Co., of Chicago,, wished to put on a more elaborate program of fireworks than had been agreed upon and had made the following proposition, which he had accepted:

"That the Pain Pyro Co., of Chicago, would accept \$600, the amount appropriated by the Ohio State Board of Agriculture, and the grand stand gate receipts on the evenings of August 30, 31, September 1 and 2, up to the amount of \$2,400, in payment of the four evenings' program of fireworks display in front of the grand stand. If a greater sum than \$2,400 was derived from such grand stand receipts, the same to belong to the Ohio State Board of Agriculture."

Mr. Jobe moved that the first six rows of grand stand seats be reserved and the seats sold at 50 cents each, and that box seats be sold at 75 cents during the evening performances. The motion was adopted.

Mr. Miller moved that the south section of grand stand be reserved at 50 cents and boxes at 75 cents during the afternoons. The motion was adopted.

On motion of Mr. Jobe it was agreed that buildings be kept open until 9 o'clock each evening.

On demand of interested companies, the Board resolved to change condition governing competitive drills so that each entrant would be privileged to drill its own tactics.

There being no further business before the Board, at five o'clock p. m., on motion of Mr. Beidler, it adjourned to meet on call of the president.

ADMINISTRATION BUILDING,  
STATE FAIR GROUNDS, September 2, 1909.

The Ohio State Board of Agriculture met at 5 o'clock p. m., all members present, President Kilgore presiding.

Mr. Beidler introduced the following resolution and moved its adoption:

"Resolved: That it is the sense of this Board that in order to meet the growing demands of the Ohio State Fair, and to better fit ourselves to perform the duties of conducting said fair, the members of this Board attend other state fairs and investigate the conduct thereof and report same at a future meeting of this Board; and that the proper expenses of said members in attending such fairs be paid."

On roll-call all members voted "aye" except Mr. Cromley.

At 5:30 o'clock p. m., on motion of Mr. Cross, the Board adjourned to meet on call of the president.

ADMINISTRATION BUILDING,  
STATE FAIR GROUNDS, September 3, 1909.

The Board met at 3 o'clock p. m., all members present except Messrs. Beidler, Ganson and Cross; President Kilgore in the chair.

Mr. Frank P. Spellman appeared before the Board and requested that in view of the fact of the heavy rain on Friday, Children's Day, the Board reduce the contract price of the exclusive show privilege from \$2,500 to \$1,950. Mr. Cromley moved that the request of Mr. Spellman be granted. On roll-call all members voted "aye," and the motion was recorded as being unanimously adopted.

Mr. Ewart moved that the additional sum of \$100 be paid to Frank P. Spellman for music furnished by Kopp's Military Band. The motion was duly seconded by Mr. Jobe, and on roll-call was unanimously adopted.

Mr. C. W. Burkett, editor of the American Agriculturist, New York, appeared before the Board and requested permission to erect a concrete building on state fair grounds east of the agricultural hall, on the site occupied by his tent for newspaper headquarters. He stated that said building would be neat, attractive and ornamental to the grounds, costing not less than \$1,000, and agreed that the plans of said building would be submitted to the architect employed by the Ohio State Board of Agriculture for approval. He further stated that he had secured this permission in a letter from the former secretary, T. L. Calvert. After discussion, Mr. Cromley offered the following resolution and moved its adoption:

"Be it Resolved: That it is the sense of this Board that if, after platting the grounds east of the agricultural building, it is concluded to devote such space for the use of newspapers, the American Agriculturist shall be given the corner lot nearest the east central building, now covered by its tent."

On roll-call the resolution was adopted.

At four o'clock p. m., on motion of Mr. Jobe, the Board adjourned to meet at call of the president.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, September 14, 1909.

On call of President Kilgore the Ohio State Board of Agriculture met at 10 o'clock a. m., all members responding to roll-call except Messrs. Beidler and Miller.

The secretary read the minutes of the preceding meeting and they were approved.

The secretary stated that Mr. J. E. Gooding, who had the merry-go-round concession at the recent Ohio State Fair, had requested that on

account of rain on Children's Day, Friday, September 3, the contract price of said concession be reduced. Mr. Ewart moved that the price of said privilege be reduced from \$350 to \$300. The motion was duly seconded by Mr. McFarland and on roll-call was unanimously adopted.

The secretary stated that Mr. Tom Dempsey had made written application for rent of cattle barn for sale of cattle to be held November 4, he agreeing that said sale cattle be tuberculin tested in accordance with the rules of the Board. On motion of Mr. Cromley it was agreed that his request be granted, subject to the rules of the Board.

The secretary presented the matter of payment of the Old Guard for policing Grant cabin during the continuance of the recent fair. Mr. Ganson moved that the sum of \$100 be allowed for such services, and on roll-call the motion was unanimously adopted.

The secretary presented bill of E. E. Doty, amount \$100, for services in connection with civic society drills. Mr. Ewart moved that Mr. Doty be allowed \$50 for said services. On roll-call the motion was adopted.

The secretary presented and read a communication from Prof. Sherman, dean of College of Engineering, O. S. U., proposing to make complete survey and plat of state fair grounds for the sum of \$300, the work to be performed by students of the college under his personal supervision. Mr. Jobe moved that the proposition be accepted. On roll-call the motion was unanimously adopted.

The secretary presented and read a communication from the Columbus Cat Club, requesting the loan of poultry coops for its second annual exhibition to be held in Columbus February next. Mr. Ewart moved that it is the sense of the Board that no personal property on state fair grounds be loaned, except to state institutions and by the written consent of the governor. The motion was carried.

A 12 o'clock m., on motion of Mr. Cross, the Board recessed until 1 o'clock p. m., at which hour it resumed its session.

The secretary presented a protest in the horse department filed by W. S. Robinson, Mt. Sterling, Ohio, against the payment of first premium in class 145 coaching parade, won by Olentangy Stock Farm; class 137, equestrianism, won by J. B. Vance, Lockbourne, Ohio, and class 32, American carriage horses, won by Highland Forest Farm, Fulton, Ohio. Hearing on said protest was deferred until the next meeting of the Board.

The Institute Committee presented its partial report, in which places for holding institutes for the coming season were selected, and also a partial list of institute instructors. On motion of Mr. Cromley the report was adopted. On motion of Mr. Ganson the committee was granted an extension of time for the further selection of instructors.

Mr. Ganson moved that in accordance with agreement with the Columbus Chamber of Commerce, said body be permitted free use of the

state fair grounds for the purpose of conducting an industrial exposition to be held the last two weeks of June, 1910. On roll-call the motion was unanimously adopted.

The secretary stated that Miss Amelia E. Ludwig, of this city, had been awarded a premium in the art department, but the judge had reconsidered decision and awarded said premium to another exhibitor. Miss Ludwig requested that original decision stand. Mr. Ewart moved that the judge be sustained in her final decision. The motion prevailed.

Mr. M. M. Maxwell, secretary of the Ohio Good Roads Association, and Mr. Huston, vice-president of said organization, appeared before the Board with request that they be granted free use of one or two buildings on fair grounds for exhibition of road-building machinery at coming convention of above named organization, to be held in Columbus, October 26-29, inclusive. Mr. Maxwell stated that if request were granted they would improve 11th avenue from Big Four tracks to central gates, and also make needed improvements on roads in fair grounds. He further stated that this work would be completed with no expense to the Board, as the Franklin county commissioners had agreed to furnish necessary material and the exhibitors would provide the machinery to be employed in the work. Mr. Jobe moved that their request be granted. On roll-call the motion was unanimously adopted.

Mr. Henry F. Romaine, Jr., contractor for woman's building, presented a bill for \$366.60 for authorized changes in construction of said building, and also a bill for \$370 for cinders used in cement work. Messrs. Dawson & Holbrook, architects of the Board, recommended that the latter bill be rejected. Mr. Ganson moved that the bill of \$366.60 be accepted, and that the Board concur in the architects' recommendation relative to the rejection of the bill of \$370. On roll-call the motion was unanimously adopted.

Mr. Ganson moved that a penalty of \$600, in accordance with terms of contract, be imposed upon Henry F. Romaine, Jr., contractor, for failure to complete woman's building within the specified contract time. On roll-call the motion was unanimously adopted.

Mr. F. T. Eagleson, special counsel of the attorney general's department, appeared before the Board and rendered a verbal opinion to the effect that the law did not authorize any compensation for services rendered by the treasurer of the State Board of Agriculture while acting in the capacity of such treasurer.

Mr. Holbrook, architect for the Board, read numerous suggestions as to improvements on fair grounds and buildings. Mr. Cromley moved that these suggestions be approved and Mr. Holbrook be authorized to prepare plans and estimates for same, these to include also necessary new buildings and proposed changes in the machinery, sheep and swine



buildings, and that he report same at next meeting of the Board. On roll-call the motion was unanimously adopted.

At 4:30 o'clock p. m., on motion of Mr. Jobe, the Board adjourned to meet on call of the president.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, October 26, 1909.

Pursuant to call, the Ohio State Board of Agriculture met at 10 o'clock a. m., all members responding to roll-call except Mr. Beidler.

The minutes of the preceding meeting were read and approved.

In accordance with resolution passed at last meeting, the institute committee made report of its selection of instructors for the coming season. On motion of Mr. Cromley the report was ratified.

On motion of Mr. Ewart it was agreed that the Institute Normal be held in Columbus, November 16-17 next.

The secretary stated that he had consulted the attorney general with reference to insurance on fair ground buildings, and said attorney general gave as his opinion that it would be illegal to insure such buildings.

At 12:30 o'clock p. m., on motion of Mr. Jobe, a recess was taken until 2 o'clock p. m., at which hour the Board reconvened and proceeded to the transaction of business.

In accordance with resolution passed at last meeting, the Board announced its readiness to hear evidence in the protest of W. S. Robison, Mt. Sterling, Ohio, against certain awards in the horse department. The secretary stated that all interested persons had been duly notified of said hearing. Mr. Jobe moved that inasmuch as Mr. Robison had failed to appear in person or by attorney, and no evidence being offered to sustain protest, the awards as made by the judges be approved by the Board. On roll-call the motion was unanimously adopted.

On motion of Mr. Ganson, Secretary A. P. Sandles was appointed as delegate to represent the State Board of Agriculture at the Farmers' National Congress convening in Raleigh, North Carolina, November 4th next.

Mr. Jobe moved that the Board extend an invitation to said Farmers' National Congress to meet in Columbus in 1910. The motion prevailed.

Mr. Cromley moved that each member and officer who attended state fairs as delegates of the Board submit written reports of such trips at next meeting. The motion was carried.

In pursuance with request made at last meeting of the Board, Mr. Holbrook, architect, submitted estimates of cost of proposed new buildings and improvements on fair grounds.

Mr. Miller moved that the secretary be authorized to negotiate for decorative plants to be placed in lakes on fair grounds. The motion was adopted.

On motion of Mr. Cromley, the architect of the Board was instructed to submit plans and specifications for coliseum and cattle washing barn at next meeting. The motion was adopted.

Mr. McFarland moved that it is the sense of the Board that the 1910 Ohio State Fair be held the first full week in September. The motion was unanimously adopted.

By common consent it was agreed that the Board as a body make an inspection tour of the serum farm at Reynoldsburg and the Ohio state fair grounds on October 27th.

At 5 o'clock p. m., on motion of Mr. Dean, the Board adjourned to meet on call of the president.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, November 16, 1909.

On call of President Kilgore the Ohio State Board of Agriculture met at 7:30 o'clock p. m., all members responding to roll-call except Messrs Beidler and Ganson.

The minutes of the preceding meeting were read and approved.

The secretary made report of his attendance at the recent meeting of Farmers' National Congress, held in Raleigh, N. C.

The matter of necessary appropriations for properly conducting the work of the Board was thoroughly discussed, whereupon Mr. Jobe moved that the Board petition the legislature to appropriate the sum of \$50,000 annually for the suppression and prevention of diseases among live stock. The motion was carried.

On motion of Mr. Cromley, it was agreed that the present amount appropriated for the encouragement of agriculture was inadequate to meet the growing needs of the Department, and that the legislature be petitioned to appropriate the sum of \$35,000 annually, under above mentioned title.

Mr. Dean moved that the Board petition for the sum of \$6,000 annually for ordinary repairs and improvements on state fair grounds. The motion prevailed.

Mr. Miller moved that the Board petition the legislature to appropriate the sum of \$150,000 for the erection of additional exhibition buildings on the state fair grounds. The motion was unanimously adopted.

Mr. Cromley moved that the legislature be petitioned to appropriate a sum sufficient to pay outstanding bonded indebtedness of the Board and accrued interest thereon. The motion was adopted.

Mr. Cross moved that the Board petition the legislature to amend the present institute law so that the sum of \$325 be available from each county for the purpose of conducting institutes, and that of this amount the State Board of Agriculture to receive \$200, the balance to be apportioned among the various institutes of counties, as now provided by statute. The motion was adopted.

The secretary presented the matter of payment of current year's dues in American Association of Fairs and Expositions. Mr. Dean moved that the secretary be instructed to make settlement of said dues. On roll-call the motion was unanimously adopted.

On motion of Mr. Cromley the following resolution was adopted:

"Resolved: That it is the sense of the Ohio State Board of Agriculture that the officers of State Board, President L. W. Kilgore, Vice-president William Miller, Treasurer C. W. McFarland and Secretary A. P. Sandles attend American Association of Fairs and Expositions, held in Chicago, December 2, 1909, for the purpose of fixing dates for various state fairs and also to consider adoption of uniform classification of premiums and to discuss fair management in general."

Mr. Jobe moved that the opening date of the coming institute season be December 10, next.

At 11 o'clock p. m., on motion of Mr. Miller, the Board adjourned to meet on call of the president.

FREMONT, OHIO, December 7, 1909.

On call of President Kilgore the Ohio State Board of Agriculture met at 11 o'clock a. m., and the following members responded to roll-call: Messrs. Beidler, Cromley, Cross, Ganson, Jobe, Miller and McFarland. In the absence of President Kilgore, Vice-president Miller was in the chair.

The minutes of the preceding meeting were read and approved.

Mr. C. D. Warner, of Chicago, Ill., representing the Cement Products Exposition Company, appeared before the Board with reference to erection of building for showing cement products at the Ohio State Fair. Mr. Warner stated that such a building was desired by cement manufacturers, as it would enable proper classification of cement products and add greatly to the value and interest of this class of exhibits. He further stated that his company would bear its proper share of the cost

of erecting the proposed structure. It being the sense of the Board that the proposition as outlined by Mr. Warner would be favorably entertained, on motion of Mr. Jobe, the secretary was instructed to secure written proposition or propositions from said Cement Products Exposition Company, relative to the erection of said structure.

Mr. McFarland, as chairman of the delegation to the recent meeting of the American Association of Fairs and Expositions, held in Chicago, made report of its proceedings.

In the matter of classification of live stock as recommended by the above association, Mr. Ganson moved that approval of same be deferred until next meeting of the Board. The motion prevailed.

The secretary stated that State School Commissioner Zeller was desirous that the Board erect a modern country school house on state fair grounds. If the Board would agree to erect such a building, the commissioner agreed to thoroughly equip it and give wide publicity to this feature of the exposition. Mr. Beidler moved that the secretary request Commissioner Zeller to appear before the Board at its January meeting and submit plans and specifications of said building and cost of same.

The secretary presented the request of Secretary J. Y. Bassell, of the Columbus Chamber of Commerce, requesting change of dates for proposed Columbus Industrial Exposition. On motion of Mr. McFarland, consideration of same was deferred until next meeting of the Board.

The secretary presented request from the American Agriculturist that said publication be granted permission to erect building on state fair grounds. On motion of Mr. Beidler, the secretary was requested to ascertain from the architect of the Board the advisability of granting said request.

The secretary made report of the condition of the appropriation funds of the Department.

At 1 o'clock p. m., on motion of Mr. Ganson, the Board recessed until 6 o'clock p. m., at which hour it reconvened and proceeded to the transaction of business.

Mr. Beidler moved that the secretary be requested to ascertain from the attorney general the legal right of the Board to permit any firm, organization or association, not strictly agricultural, the use of the state fair grounds and buildings thereon. The motion was unanimously adopted.

On motion of Mr. Cromley it was agreed that exhibits at the exposition to be held on the state fair grounds June next, under the auspices of the Chamber of Commerce, be restricted exclusively to the manufactures and products of Columbus.

At 7 o'clock p. m., on motion of Mr. Cross, the Board adjourned to meet on call of the president.

DEPARTMENT OF AGRICULTURE,  
COLUMBUS, OHIO, January 11, 1910.

The Ohio State Board of Agriculture met at 4:30 o'clock p. m., President Kilgore in the chair. On roll-call all members responded except Messrs. Beidler, Ganson and McFarland.

The minutes of the preceding meeting were read and approved.

Mr. J. W. Zeller, State School Commissioner, appeared before the Board and urged the propriety and necessity of establishing a model country school building on state fair grounds.

The secretary presented and read the following opinion from the attorney general, in reference to resolution of request passed at previous meeting:

"On examination of the laws relating to the powers and duties of the Ohio State Board of Agriculture, I find no authority, expressed or implied, authorizing any such use of the Ohio state fair grounds and buildings. Since our Supreme Court holds that state officers have only those powers and duties which are specifically granted or necessarily implied, and since the use mentioned in your letter does not have to do with the encouragement or promotion of agriculture in the state of Ohio, I must advise you that you are without authority to permit such use of the Ohio state fair grounds and buildings."

He stated that he had notified Secretary J. Y. Bassell, of the Columbus Chamber of Commerce, as to this opinion, and that a committee from that body was in waiting to be heard by the Board. Upon being admitted the committee, through its secretary, Mr. Bassell, stated that the Chamber of Commerce had already expended large sums of money in promoting said proposed Industrial Exposition, and desired to ascertain what, if any, action could be taken to have said decision of the attorney general so modified that the Board could legally grant said Chamber of Commerce the use of the state fair grounds and buildings thereon. The matter was thoroughly discussed by all present.

The secretary made report of receipts and expenditures of the 1909 Ohio State Fair.

Mr. Miller, chairman, made the following report:

"To the State Board of Agriculture.

"Gentlemen:—We, the undersigned, beg leave to submit the following report:

"Under the now existing law governing the Ohio Department of Agriculture, all receipts, with the exception of those pertaining to the state fair, are de-

posited in the state treasury, and the secretary of the Board is required to file with the auditor of state monthly and quarterly statements as to its financial transactions. Your committee examined the books and vouchers with reference to these funds, and found same to agree with statements filed. Under the statute the Board may retain from state fair receipts a sum sufficient to meet the necessary expenses of conducting the exposition, and is required to immediately certify the balance remaining into the state treasury. In accordance with above we find that there has been deposited with the state treasurer the sum of \$17,037.97, profits of the last exhibition. Checks and vouchers with reference to the state fair funds were carefully compared and found to agree. A full report of all the financial transactions of the Board was found in the permanent financial records.

"Respectfully submitted,

(Sgd) WILLIAM MILLER,

G. E. JOBE,

P. G. Ewart,

Auditing Committee."

Mr. Cross moved that said report be approved. On roll-call the motion was unanimously sustained.

The secretary presented and read a protest filed against the payment of per capita allowance of the East Cuyahoga County Agricultural Society. Action in the matter was deferred.

At 6:30 o'clock p. m., on motion of Mr. Cromley, the Board recessed until 11:00 o'clock a. m., Wednesday, January 12.

January 12, 1910.

Pursuant to recess adjournment, the Board met at 11 o'clock a. m., with all members present except Messrs. McFarland and Beidler.

In the matter of granting use of state fair grounds to the Columbus Chamber of Commerce, in accordance with opinion of the attorney general, Mr. Ganson made the following motion: That the Columbus Chamber of Commerce be requested to submit its request in writing for the use of Ohio state fair grounds, and that said written request specify details and nature of the proposed industrial exposition and its full scope, and date of same, and what indemnity would be given for the protection of said state fair grounds. On roll-call all present voted "aye" and the motion was recorded as being unanimously adopted.

At 11:30 o'clock a. m., on motion of Mr. Dean, the Board recessed until 8:30 o'clock a. m., Thursday, January 13.

January 13, 1910.

The Board resumed its session at 8:30 o'clock a. m., with all members present except Mr. McFarland.

The secretary called attention to the fact that two agricultural societies in Scioto county had filed their annual reports for the year 1909

with the Board, and each was desirous of securing the per capita allowance due that county. He further stated that representatives from these two societies were present and desired a hearing before the Board. The hearing being granted, each society, through its representatives present, stated its claims for recognition by the state board. At the close of the hearing, Mr. Beidler moved that the matter be referred to the committee on credentials. The motion prevailed.

Mr. E. C. Foote, of the East Cuyahoga County Agricultural Society, appeared before the Board relative to protest against his society receiving its per capita allowance. He stated that he had received the \$100 in question, but it was for the purpose of covering his expenses as president of said society, and that no part of the money was intended for compensation for services rendered. Mr. Foote made the following signed statement:

"In answer to protest filed by Mr. George Lang against the Cuyahoga County Agricultural Society receiving per capita certificate because of having paid myself, E. C. Foote, \$100 out of the funds of said society, I hereby declare that said sum was paid in lieu of expenses incurred by me as president of said society.  
(Sgd.) E. C. FOOTE."

Mr. Dean moved that Mr. Foote's explanation be accepted and protest be not sustained. On roll-call the motion was unanimously adopted.

Mr. Holbrook, architect of the Board, made report of the advisability of permitting the American Agriculturist to erect a building on the Ohio state fair grounds.

Mr. Jobe moved that permission be granted the American Agriculturist to erect said building, subject to the rules and approval of the Board. On roll-call the motion was unanimously adopted.

The secretary presented and read the following communication from the Columbus Chamber of Commerce, relative to proposed industrial exposition, to be conducted under its auspices on the Ohio state fair grounds.

"State Board of Agriculture, Columbus, Ohio.

"Gentlemen:—Acting upon the instructions of your Board, as embodied in the resolution this day adopted in reference to the application heretofore made by the Chamber of Commerce of this city for the use of the state fair grounds for the purpose of an industrial exposition, I am authorized on behalf of the board of directors of the Chamber of Commerce to submit the following for your consideration:

"The Chamber of Commerce of the city of Columbus, Ohio, respectfully asks permission of your honorable Board for the use of the state fair grounds, and such of the buildings thereon as may be needed, for a period of two weeks

from and after June 21, 1910, for the purpose of exhibiting the manufactured products of this city.

"The object of this exposition is to acquaint the people of our city and surroundings with the great variety of the implements and machinery of an agricultural and mechanical nature that are here manufactured—a display in the success of which the people of any city might well be proud.

"In setting up and exhibiting to our people the products of our mills, factories, shops, etc., our manufacturers have in mind only the advancement of the best interests of our city.

"The Chamber of Commerce is very solicitous in making this exhibition a success in every particular and there is no other place available for such a display other than the state fair grounds.

"If this request is granted and the grounds are placed at our disposal for the time named, the Chamber of Commerce will execute to your Board a bond in whatever sum may be held sufficient, indemnifying your Board against any loss, cost, damage or expense of any nature arising from any cause in connection with the exposition. Furthermore, if, in the opinion of your Board, other and additional insurance should be taken upon any of the buildings or permanent structures on the ground for covering the time of the exposition, we will upon word from you to that effect, have such insurance written.

"We also agree, at our own cost, to put the grounds and buildings at the conclusion of the exposition in as good order and condition as they were at the time the exposition opened and to save your Board free and harmless from any and all costs or expense arising by reason of or growing out of the use of the same.

"We would be glad, in case you think it advisable, to have a committee appointed by your Board to act with us in an advisory capacity; if, however, you should not deem this advisable, we should like to appoint some members of your Board on some of the committees in charge of the exposition that your Board might be represented in all that we may hope to do for the success of the undertaking.

"Appreciating very highly the consideration you have heretofore been pleased to show us and trusting that we may have a favorable reply from you in regard to this request, and awaiting your pleasure, we remain,

"Very respectfully yours,

"(Sgd) Columbus Chamber of Commerce,

"WM. G. BENHAM, President."

Mr. Cromley moved that permission be granted to the Columbus Chamber of Commerce for the use of the state fair grounds in holding thereon an industrial exposition of the nature and scope expressed in said written request dated January 12, upon its compliance with all conditions which it has included in said request, and any other reasonable request the Board may incorporate; and that further the secretary be instructed to submit a copy of said written request and a copy of this resolution to the attorney general, to ascertain whether or not granting of said request is in violation of law. The motion was duly seconded by Mr. Jobe, and on roll-call was unanimously adopted.

At 10 o'clock a. m., on motion of Mr. Dean, the Board adjourned to meet on call of the president.



# Crop and Live Stock Statistics

AS ESTIMATED BY THE

## OHIO DEPARTMENT OF AGRICULTURE

**From Returns Received From Its Corps of Regular Township Crop and Stock Correspondents During the Year 1908.**

The Division of Crop and Stock Statistics is one of the most important of this department, having some fifteen hundred volunteer correspondents and an efficient corps of clerks to promptly compile and publish these statistics.

The chief purpose of these reports is to give the farmer information that will aid him in disposing of his crops and stock to best advantage. That this may be accomplished special advance sheets are monthly furnished the press of the state and leading agricultural journals of the country, while later the detailed report giving results by counties is issued and widely circulated.

Published herein are the monthly reports which have special reference to acreage or the total estimated production for the state. Following these reports will be found tables showing wheat and corn production from 1850 to the present year, inclusive, together with a range of prices, the average prices for each year, and the same by a series of ten years; tables showing the number of live stock in the state as returned to the Auditor of State; agricultural statistics as returned to the Secretary of Agriculture by county auditors, and ten-year comparative tables of the different crops of the state.



### DISTRIBUTION OF LIVE STOCK.

[illegible]

\*The number of stallions as given in the table is as reported from 543 townships of the state, and does not, therefore, represent the approximate number in each county or for the state.

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE DISTRIBUTION OF LIVE STOCK, MARCH 1, 1909  
—Continued.

Counties.	Per cent. of the Different Breeds of Swine.									
	Berkshires.	Poland Chinas.	Chester Whites.	Duroc Jerseys.	Victorias.	Suffolks.	Yorkshires.	Essex.	Cheshire.	Mixed or Unknown.
Adams .....	Per cent. 6	Per cent. 49	Per cent. 16	Per cent. 14	Per cent. ....	Per cent. ....	Per cent. ....	Per cent. ....	Per cent. ....	Per cent. 15
Allen .....	9	23	9	12	....	....	....	....	....	51
Ashland .....	12	28	10	12	....	....	....	....	....	37
Ashabula .....	13	8	23	3	....	....	....	....	....	53
Athens .....	8	26	23	12	....	....	....	....	....	37
Auglaize .....	8	21	9	12	....	....	....	....	....	55
Belmont .....	11	25	23	7	....	....	....	....	....	33
Brown .....	9	35	8	15	1	1	1	1	....	33
Butler .....	9	50	13	21	....	....	....	....	....	10
Carroll .....	9	30	15	30	....	....	....	....	....	46
Champaign .....	10	28	15	11	....	....	....	....	....	20
Clark .....	3	22	5	22	2	2	2	2	....	76
Clermont .....	1	43	10	23	....	....	....	....	....	34
Clinton .....	9	25	23	7	....	....	....	....	....	23
Columbiana .....	21	22	15	23	....	....	....	....	....	36
Coshocton .....	2	24	11	15	1	1	1	....	....	33
Crawford .....	2	7	16	2	....	....	....	....	....	73
Cuyahoga .....	2	43	15	22	....	....	....	....	....	15
Darke .....	1	35	12	17	....	....	....	....	....	56
Defiance .....	7	30	14	17	....	....	....	....	....	27
Delaware .....	40	5	15	10	....	....	....	....	....	57
Erie .....	18	30	1	23	....	....	....	....	....	55
Fairfield .....	9	21	22	21	....	....	....	....	....	24
Fayette .....	9	20	1	21	....	....	....	....	....	46
Franklin .....	9	21	22	5	....	....	....	....	....	36
Fulton .....	7	20	....	4	....	....	....	....	....	70
Gallia .....	8	20	22	5	....	....	....	....	....	41
Geauga .....	8	2	26	3	....	....	....	....	....	70
Greene .....	8	13	4	21	....	....	....	....	....	57
Guernsey .....	7	47	9	7	....	....	....	....	....	57
Hamilton .....	5	38	11	18	....	....	....	....	....	32
Hancock .....	7	27	11	10	....	....	....	....	....	33
Hardin .....	8	40	8	21	....	....	....	....	....	51
Harrison .....	7	42	14	2	....	....	....	....	....	23
Henry .....	10	21	8	12	....	....	....	....	....	34
Highland .....	5	20	9	25	....	....	....	....	....	32
Hocking .....	4	23	30	5	....	....	....	....	....	31
Holmes .....	20	21	19	8	....	....	....	....	....	38

	8	27.7	13.5	12.5	.2	.2	.7	.1	.2	
Huron .....	8	26	19	11	1	1	.....	.....	.....	36
Jackson .....	.....	40	13	17	.....	.....	.....	.....	.....	30
Jefferson .....	14	40	14	4	.....	1	.....	.....	.....	27
Knox .....	11	28	9	9	.....	.....	1	.....	.....	44
Lake .....	9	8	12	.....	.....	.....	.....	.....	.....	71
Lawrence .....	11	26	33	.....	3	2	.....	2	.....	18
Licking .....	17	34	11	6	.....	.....	2	.....	.....	32
Logan .....	8	27	14	12	.....	.....	.....	.....	.....	44
Lucas .....	3	20	19	.....	.....	.....	4	.....	.....	49
Madison .....	4	25	14	16	.....	.....	.....	.....	.....	41
Mahoning .....	3	28	8	18	.....	.....	.....	.....	.....	42
Marion .....	36	10	20	3	.....	.....	.....	.....	.....	31
Medina .....	10	43	15	21	.....	.....	.....	.....	.....	11
Melara .....	18	8	17	4	.....	.....	4	.....	.....	49
Melers .....	16	34	24	9	.....	.....	.....	.....	.....	17
Meigs .....	.....	30	10	20	.....	.....	.....	.....	.....	40
Merger .....	.....	29	14	29	2	1	.....	1	.....	21
Miami .....	3	28	14	3	.....	.....	.....	.....	.....	48
Monroe .....	9	26	14	26	.....	.....	.....	.....	.....	37
Montgomery .....	7	30	10	2	.....	.....	.....	.....	.....	28
Morgan .....	5	34	22	14	.....	1	.....	.....	.....	28
Morrow .....	6	33	17	14	.....	.....	.....	.....	.....	19
Muskingum .....	25	33	21	2	.....	.....	.....	.....	.....	43
Noble .....	7	45	4	5	.....	.....	2	.....	.....	8
Ottawa .....	6	42	13	20	.....	.....	.....	.....	.....	42
Paulding .....	5	50	8	7	.....	2	.....	.....	.....	21
Perry .....	17	26	18	14	.....	.....	1	.....	.....	20
Pickaway .....	8	41	9	18	.....	.....	.....	.....	.....	27
Pike .....	8	45	9	13	.....	.....	.....	.....	.....	34
Portage .....	10	6	16	2	.....	.....	.....	.....	.....	15
Preble .....	1	32	16	25	.....	.....	.....	.....	.....	54
Putnam .....	6	27	11	21	.....	.....	1	.....	.....	31
Richland .....	8	30	12	8	.....	.....	.....	.....	.....	20
Ross .....	9	41	7	27	.....	.....	.....	.....	.....	24
Sandusky .....	2	15	8	23	.....	.....	.....	.....	3	32
Seneca .....	13	33	22	6	.....	1	2	.....	1	11
Shelby .....	7	34	20	28	.....	.....	.....	.....	.....	23
Stark .....	8	31	6	30	.....	.....	.....	.....	2	23
Summit .....	21	21	16	7	.....	.....	.....	.....	.....	53
Trumbull .....	14	15	16	5	.....	.....	.....	.....	.....	50
Tuscarawas .....	15	30	23	2	.....	.....	.....	.....	.....	39
Union .....	13	36	13	30	.....	.....	.....	.....	.....	27
Van Wert .....	9	23	13	25	.....	.....	.....	.....	.....	12
Vinton .....	10	23	13	1	.....	.....	.....	.....	.....	27
Warren .....	2	32	13	30	.....	.....	.....	.....	.....	52
Washington .....	4	40	27	.....	.....	.....	.....	.....	.....	10
Wayne .....	15	32	12	8	.....	.....	.....	1	.....	26
Williams .....	7	15	12	23	.....	.....	.....	.....	.....	60
Wood .....	12	22	8	11	.....	.....	3	.....	.....	35
Wyandot .....	9	34	6	11	.....	.....	6	.....	1	20
Average per cent.....	8.8	27.7	13.5	12.5	.2	.2	.7	.1	.2	36.1

† B. of A.



### DISTRIBUTION OF LIVE STOCK.

Huron .....	6	13	12	18						1	1	1	6	17
Jackson .....	11	11	6	2						1	1		10	14
Johnson .....	11	32	6	6	1								9	1
Knox .....	8	17	17	30	1					1			7	10
Lake .....	3					1							30	7
Lawrence .....	2	3	3	1	1					15	19		5	12
Licking .....	14	19	6	12		2				2			6	6
Logan .....	10	11	9	12	1	8				5	1		9	15
Lorain .....	5	10	1	3	1					3	5	6	9	20
Lucas .....													47	22
Madison .....	6	18	2	5						3			11	17
Mahoning .....	3	12	1	9						5	2		8	3
Marion .....	7	15	7	7	1					3			11	10
Medina .....	2	12	5	12		2				1	6		7	28
Meigs .....	6	17	18	7	4	4							8	1
Mercer .....			3							5			8	8
Miami .....	2	2								2			37	12
Monroe .....	19	9	16	9	1	2				3	5		22	3
Montgomery .....										1			15	6
Morgan .....	8	19	15	25	4					8			1	9
Morrow .....	11	18	9	9	2						1		4	3
Muskingum .....	6	25	9	18		1							1	8
Noble .....	12	30	15	16	1					1				
Ottawa .....	7	17								7	8			
Paulding .....	6		3	3									8	13
Perry .....	12	12	15	12									14	8
Pickaway .....	24	10	6	6						3			4	17
Pike .....	6	15	3	2						3			29	4
Portage .....	1	18	11	8	1								15	23
Preble .....	1	2	2	2		1				1			12	1
Putnam .....	1	9		2						2	2		17	10
Richland .....	6	8	11	14		1				2	2		7	14
Ross .....	8	1	1	10						1	1		8	18
Sandusky .....	3	11	5	9						3	3	1	18	14
Scioto .....	2	6								4			7	26
Seneca .....	6	9	7	19						4	6		3	1
Shelby .....	2	5	7	14						2			15	26
Stark .....	7	7	10	10	3	1							17	20
Summit .....	8	13	2	6						3	5	1	5	9
Trumbull .....	3	19	7	6						1			6	20
Uscariawas .....	9	20	11	23	1	6				2	5		9	20
Union .....	12	15	7	3	9								7	5
Van Wert .....	4	10											7	6
Vinton .....	14	33	6	18						2			8	36
Warren .....	3	5	3	3	3					4	5		1	1
Washington .....	12	6	6	20						12			10	2
Wayne .....	9	6	6	8		1				2			5	6
Williams .....	2	2	4	10									19	24
Wood .....	9	3	12	8	2	1				3	14		11	29
Wyandot .....	12	13	4	2						2			20	7
Wyandot .....													16	
Average per cent.....	6.9	11.0	6.1	9.4	.7	.9	2.6	2.1	.9	1.2	9.6	11.7		





### DISTRIBUTION OF LIVE STOCK.

[illegible]

## Crop and Live Stock Statistics

### May, 1909

The following report represents the estimated area and condition of the crops named, as computed from the returns received from the official correspondents of the Department:

WHEAT—Prospect compared with an average.....	66 per cent.
SPRING BARLEY—Area sown compared with last year.....	87 per cent.
WINTER BARLEY—Prospect compared with an average.....	71 per cent.
BARLEY—Total area—	
Sown last fall.....	28 per cent.
Sown this spring.....	72 per cent.
RYE—Prospect compared with an average.....	74 per cent.
OATS—Area for 1908 as returned by township assessors.....	1,271,886 acres
Area sown this year compared with 1908.....	104 per cent.
Estimated area for the harvest of 1909.....	1,324,119 acres
CLOVER—Average date of seeding.....	March 25
Acreage sown compared with last year.....	103 per cent.
HORSES—Losses during winter and spring.....	1.7 per cent.
CATTLE—Losses during winter and spring.....	1.4 per cent.
SHEEP—Losses during winter and spring.....	2.7 per cent.
HOGS—Losses during winter and spring.....	2.3 per cent.
BERRIES—Prospect compared with an average.....	84 per cent.

The present wheat prospect shows a slight improvement since the issuance of the April report, being now estimated at 66 per cent. compared with an average, as against 62 per cent. reported one month ago. The prospect varies greatly over the state, ranging from 18 per cent. in Warren County, to 101 per cent. reported from Brown County. In thirty-two counties the estimated prospect is below 60 per cent.; eighteen counties report from 60 to 70 per cent.; fourteen counties have a fair prospect, ranging from 70 to 80 per cent.; eleven counties report from 80 to 90 per cent.; ten counties estimate the prospect between 90 to 100 per cent.; two counties report that the present prospect is for a full average crop, while, as stated above, Brown County estimates the prospect at better than an average. No material damage by insect pests has been reported. Many correspondents note the abandonment of wheat fields. The general prospect is most discouraging and the harvest will fall far short of a fair average.

As anticipated, the area seeded to oats is greater than that of one year ago, due principally to the failure of wheat. Last year the township assessors reported 1,271,886 acres sown to oats, and the Depart-

ment's official correspondents now estimate that in comparison with that area the present acreage seeded is 104 per cent., or 1,324,119 acres.

A large acreage of clover has been seeded.

Berry prospects are estimated at 84 per cent., compared with an average.

Live stock generally in good condition, with no unusual losses during the winter and spring.

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE ACREAGE AND CONDITION OF CROPS AND LOSSES TO LIVE STOCK A. Y 1, 1906.

Counties.	Wheat.		Spring Barley		Winter Barley		Barley Total Area.		Rye.	Oats.	
	Prospects com- pared with an average.	Acreage sown compared with last year.	Prospects com- pared with an average.	Sown last fall.	Sown this spring.	Prospects com- pared with an average.	Area for 1908 as returned by township assessors.	Area sown this year com- pared with 1908.		Per cent.	Acres.
									Per cent.		
Adams	96	102	80	45	100	91	2,075	75	1,556	75	Acres.
Allen	63	82	80	45	100	73	18,014	109	19,633	109	19,633
Ashtabula	65	82	80	45	100	68	18,430	100	18,430	100	18,430
Ashtabula	67	82	80	45	100	74	24,071	101	24,311	101	24,311
Athens	97	100	80	45	100	93	724	85	615	85	615
Augulize	41	100	80	45	100	50	23,190	110	25,509	110	25,509
Belmont	71	100	80	45	100	81	8,800	103	9,004	103	9,004
Brown	101	100	80	45	100	103	4,871	100	4,871	100	4,871
Butler	40	100	35	40	60	63	6,024	151	9,096	151	9,096
Carroll	73	85	80	45	100	79	12,575	88	11,066	88	11,066
Champaign	34	50	50	50	50	52	22,088	98	21,646	98	21,646
Clark	43	50	50	50	50	97	10,164	96	9,757	96	9,757
Clermont	98	50	50	50	50	84	6,087	84	5,113	84	5,113
Clinton	71	50	50	50	50	107	3,482	107	3,725	107	3,725
Columbiana	78	50	50	50	50	83	18,358	102	18,725	102	18,725
Coshocton	74	50	50	50	50	74	10,873	95	10,329	95	10,329
Crawford	49	88	12	12	88	72	26,119	106	26,826	106	26,826
Cuyahoga	59	100	60	40	60	69	11,683	112	13,085	112	13,085
Darke	35	75	60	40	60	62	33,815	114	33,549	114	33,549
Defiance	35	59	60	40	60	80	28,319	106	30,018	106	30,018
Delaware	63	59	60	40	60	79	10,691	99	10,684	99	10,684
Erle	70	85	17	17	83	91	14,013	109	15,274	109	15,274
Fairfield	88	85	100	100	100	101	2,684	101	2,711	101	2,711
Fayette	78	100	100	100	100	86	2,033	86	1,748	86	1,748
Franklin	61	100	100	100	100	76	8,788	99	8,700	99	8,700
Fulton	67	60	100	100	100	82	25,348	103	26,108	103	26,108
Gallia	86	60	100	100	100	80	1,141	93	947	93	947
Geauga	59	90	85	85	100	61	13,867	93	12,896	93	12,896
Greene	34	90	85	85	100	60	4,527	143	6,474	143	6,474
Guernsey	65	73	85	85	100	67	6,081	96	5,777	96	5,777
Hamilton	59	73	85	85	100	77	1,465	111	1,626	111	1,626
Hancock	62	75	85	85	100	67	19,543	108	21,106	108	21,106
Hardin	46	100	85	85	100	66	16,232	111	18,018	111	18,018
Harrison	74	100	85	85	100	80	7,760	101	7,838	101	7,838
											Estimated area for harvest of 1909.

Henry	86	85	50	50	100	76	27,014	98	26,474
Highland	83	100	71	67	100	81	2,711	90	2,440
Hocking	100	100	71	67	100	95	1,350	70	1,345
Holmes	78	100	71	67	100	95	18,002	100	18,002
Huron	54	71	67	34	66	69	29,326	106	31,086
Jackson	88	71	67	34	66	83	688	81	557
Jefferson	95	71	67	34	66	76	10,073	101	10,174
Knox	64	71	67	34	66	72	11,500	95	10,925
Lake	90	90	90	75	25	90	8,231	84	8,221
Lawrence	100	90	90	75	25	110	2,119	84	1,789
Licking	78	100	90	75	25	84	9,752	84	8,778
Logan	21	100	90	75	25	41	20,550	90	24,885
Lorain	47	90	90	40	60	41	19,947	121	20,744
Lucas	64	110	90	40	60	92	14,176	104	16,444
Madison	81	110	90	40	60	92	19,865	116	16,444
Mahoning	62	110	90	40	60	87	15,322	105	20,853
Marion	63	110	90	40	60	71	25,588	101	15,475
Medina	56	100	90	40	60	76	21,950	97	24,800
Mercer	88	100	90	40	60	76	1,325	101	22,109
Melgs	53	110	90	40	60	81	31,084	82	1,086
Mercer	53	110	90	40	60	81	19,953	82	35,435
Miami	33	110	90	40	60	81	9,787	139	27,707
Monroe	90	110	90	40	60	81	6,532	99	6,516
Montgomery	34	110	90	40	60	81	9,787	104	10,178
Morgan	89	110	90	40	60	81	13,357	89	1,448
Morrow	86	110	90	40	60	81	2,605	102	13,624
Muskingum	83	110	90	40	60	81	15,917	104	6,097
Noble	84	110	90	40	60	81	35,774	93	2,422
Ottawa	58	92	92	8	92	73	1,955	107	17,031
Paulding	50	73	92	8	92	67	2,173	106	37,563
Perry	83	95	95	95	100	82	1,831	105	2,053
Pickaway	91	95	95	95	100	82	1,831	85	1,847
Pike	95	95	95	95	100	82	2,173	85	1,153
Portage	95	95	95	95	100	82	27,386	99	27,192
Preble	46	95	95	95	100	82	7,106	144	10,233
Putnam	41	95	95	95	100	82	20,115	99	19,913
Richland	50	87	90	10	90	60	23,715	81	21,580
Ross	73	87	90	10	90	56	1,349	79	1,035
Sandusky	64	87	90	25	75	59	25,241	99	24,988
Scioto	92	87	90	25	75	59	2,313	75	1,734
Seneca	46	87	90	25	75	59	25,728	103	25,489
Shelby	25	87	90	25	75	59	32,561	111	36,142
Stark	71	87	90	25	75	59	31,066	111	31,066
Summit	64	87	90	25	75	59	18,296	98	18,113
Trumbull	70	87	90	25	75	59	18,017	98	18,737
Tuscarawas	70	87	90	25	75	59	18,604	104	18,904
Union	53	130	100	100	100	61	16,923	108	18,276
Van Wert	38	67	100	100	100	61	35,042	107	37,494
Vinton	96	67	100	100	100	100	35,819	80	37,055
Warren	18	87	100	100	100	100	6,243	138	7,615
Washington	98	87	100	100	100	100	4,916	138	4,866
Wayne	83	87	100	100	100	97	30,826	97	29,901
Williams	47	88	95	10	90	74	24,909	103	25,656
Wood	59	63	50	30	70	68	51,152	104	53,198
Wyandot	57	90	100	100	100	62	18,655	108	20,147
Average per cent.	66	87	71	28	72	74	1,271,888	104	1,324,119
Totals	66	87	71	28	72	74	1,271,888	104	1,324,119

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE ACREAGE AND CONDITION OF CROPS AND  
LOSSES TO LIVE STOCK MAY 1, 1909.—Concluded.

Counties.	Wheat.		Clover.		Horses	Cattle	Sheep	Hogs	Berries
	Damage by Hessian fly.	Damage by other insects.	Average date of seeding March 1.	Acres sown compared with last year.	Losses during winter and spring.	Losses during winter and spring.	Losses during winter and spring.	Losses during spring.	Prospects com- pared with an average.
	Per cent.	Per cent.	Days.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Adams			19	110	2	2	3	2	88
Allen	1		24	106	2	1	2	2	73
Ashland	1	3	27	99	2	1	3	4	75
Ashabula			33	111	1	2	3	1	79
Athens		1	18	102	1	1	3	2	67
Auglaize		1	23	106	1	1	2	1	84
Belmont	4	2	23	100	2	2	2	1	86
Brown	2	2	14	106	2	2	2	2	83
Butler		2	16	100	1	2	4	3	88
Carroll			25	90	1	1	4	1	90
Champaign	3	5	30	99	1	2	1	1	94
Clark			16	103	1	1	2	1	83
Clermont		1	5	108	1	1	2	2	91
Clinton			15	95	1	1	1	2	83
Columbiana	1	1	29	111	1	1	4	1	86
Coshocton		1	23	102	1	1	2	1	89
Crawford		1	29	91	1	1	3	1	88
Cuyahoga			26	107	1	2	3	1	87
Darke	1		23	103	2	2	4	1	76
Defiance		1	27	99	1	2	3	1	88
Delaware			34	101	1	1	4	1	88
Erie	1	1	32	138	1	2	4	2	87
Fairfield	1	1	10	106	1	2	1	2	82
Fayette	1	2	12	96	1	1	1	4	79
Franklin	1		21	106	1	1	1	4	88
Fulton	1		40	112	1	1	1	1	78
Gallia		1	13	107		2	1	1	90
Geauga			39	113	2	2	2	1	70
Greene			13	96	1	3	2	1	97
Guernsey	1		21	123	1	1	4	1	83
Hamilton	1		16	119	1	1	1	1	81
Hancock	2	1	30	96	1	1	1	1	82
Hardin		10	29	103	1	1	1	1	75
Harrison			23	96			4		



## Crop and Live Stock Statistics

### July 1, 1909

The following report represents area and condition of the crops named, as compiled from returns received from the regular correspondents of the Department:

Wheat—Prospect compared with an average.....	77 per cent.
" —Area sown last fall.....	1,446,543 acres
" —Plowed up this spring.....	9 per cent.
" —Estimated area for the harvest.....	1,296,098 acres
Barley—Prospect compared with an average.....	85 per cent.
Rye—Prospect compared with an average.....	85 per cent.
Oats—Prospect compared with an average.....	96 per cent.
Corn—Area in 1908.....	2,806,895 acres
" —Area this year compared with 1908.....	102 per cent.
" —Total estimated area for 1909.....	2,375,814 acres
" —Prospect compared with an average.....	88 per cent.
" —Damage by cut worm.....	2 per cent.
" --Damage by white grub.....	2 per cent.
Clover—Damage by white grub.....	2 per cent.
Potatoes—Area in 1908.....	115,584 acres
" —Area planted this year compared with 1908.....	99 per cent.
" —Estimated area for 1909.....	115,277 acres
" —Prospect compared with an average.....	93 per cent.
Tobacco—Acreage compared with last year.....	115 per cent.
Timothy—Prospect compared with an average.....	88 per cent.
Pastures—Condition compared with an average.....	98 per cent.
Horses—Condition compared with an average.....	96 per cent.
Colts—Number compared with an average.....	94 per cent.
Cattle—Condition compared with an average.....	96 per cent.
Calves—Number compared with an average.....	93 per cent.
Wool—Clip compared with last year.....	97 per cent.

Ohio's wheat harvest is now generally in active progress, and from the returns of the official correspondents of this Department it is estimated that it will produce 77 per cent. of an average yield. One month ago the prospect was reported at 73 per cent. compared with an average. The acreage to be harvested is one of the smallest in a number of years past, as it is now estimated that 9 per cent. of the original area seeded last fall was plowed up this spring, leaving but 1,296,098 acres remaining for the harvest. This is a shortage of 590,862 acres in comparison with the area harvested in 1908. From these statistics it is readily apparent that the crop of 1909 will fall far short of that of the preceding year. Heavy and continued rainfalls prevailed during the month of June and this has re-



tarded harvest, in many fields the ground being so soft that it was impossible to enter with machines. Many correspondents note damage by joint worm.

Oats are in excellent condition, having advanced 5 points since the issuance of the last report. The present prospect—96 per cent. compared with an average—is most encouraging, and as the area seeded is greater than that of 1908 an abundant harvest should result.

A large area has been planted to corn, it being estimated at 2,875,814 acres, an increase of 68,919 acres over the area of 1908. Under favorable conditions this should result in one of the heaviest corn productions in Ohio's history. The present prospect is estimated at 88 per cent. compared with an average. The plant generally is small, but a fine stand. The correspondents report no material damage by cut and grub worms. Owing to frequent rainfalls during the past month, proper cultivation has been impossible.

The area planted to potatoes is approximately the same as last year, being estimated at 115,277 acres. The prospect is reported at 93 per cent. compared with an average, an increase of 9 per cent. in comparison with prospect on corresponding date of 1908.

Live stock generally in fine condition. Pastures excellent.

## REPORT ON THE AREA AND PROSPECTS OF WHEAT, CORN, POTATOES AND OTHER CROPS, JULY 1, 1908.

Counties.	Wheat.				Barley.	Rye.	Oats.	Corn.				Damage by cut-worm.	Damage by white grub.
	Prospect com- pared with an average.	Area sown last fall.	Plowed up this spring.	Estimated area for the harvest.	Prospect com- pared with an average.	Prospect com- pared with an average.	Prospect com- pared with an average.	Area in 1908.	Per cent.	Area this year compared with 1908.	Total esti- mated area for 1909.	Prospect com- pared with an average.	
	Per cent.	Acres.	Per cent.	Acres.	Per cent.	Per cent.	Per cent.	Acres.	Per cent.	Per cent.	Acres.	Per cent.	Per cent.
Adams .....	83	15,461	1	15,296	97	97	98	34,717	100	100	34,717	99	1
Allen .....	76	12,286	24	9,337	81	81	97	27,581	100	100	27,581	96	4
Ashland .....	83	21,299	38	21,299	88	88	102	29,499	103	103	29,499	98	1
Ashabula .....	73	4,361	3	4,230	60	60	94	12,522	96	96	12,522	88	1
Athens .....	94	4,391	.....	.....	.....	.....	91	9,876	90	90	9,876	88	2
Auglaize .....	82	26,447	25	19,835	97	97	90	47,864	100	100	47,864	89	1
Belmont .....	82	11,062	.....	11,062	90	90	97	17,894	102	102	17,894	101	1
Brown .....	91	16,977	16	16,807	100	100	96	44,985	103	103	44,985	94	2
Butler .....	56	34,737	.....	23,179	68	70	98	51,133	104	104	51,133	89	1
Carroll .....	89	11,864	45	18,462	100	94	100	52,142	103	103	52,142	96	3
Champaign .....	49	33,568	39	13,463	80	78	107	46,576	120	120	46,576	89	1
Clark .....	61	22,398	.....	14,548	.....	103	113	34,536	103	103	34,536	87	2
Clermont .....	105	14,548	2	34,051	103	103	103	59,731	102	102	59,731	88	3
Clinton .....	71	34,746	.....	17,880	.....	86	103	15,946	106	106	15,946	109	1
Columbiana .....	99	17,880	1	17,880	.....	86	93	23,943	104	104	23,943	89	2
Coshocton .....	86	18,046	14	15,109	74	84	93	34,151	102	102	34,151	97	2
Crawford .....	66	17,581	7	15,109	75	75	101	34,151	104	104	34,151	98	2
Cuyahoga .....	78	4,752	28	4,419	76	76	92	82,759	106	106	82,759	82	2
Darke .....	46	8,579	24	19,641	78	78	92	82,759	106	106	82,759	82	1
Defiance .....	57	8,579	6	6,521	73	73	102	32,583	109	109	32,583	87	2
Delaware .....	81	11,835	4	11,451	82	82	96	32,583	106	106	32,583	87	2
Erle .....	87	7,589	2	7,127	88	88	91	43,486	100	100	43,486	80	6
Fairfield .....	82	37,387	6	36,630	85	85	97	43,486	100	100	43,486	80	6
Fayette .....	92	26,984	10	24,298	100	100	100	35,553	108	108	35,553	80	2
Franklin .....	80	24,643	4	24,657	100	100	89	50,519	102	102	50,519	77	3
Fulton .....	84	2,476	.....	7,359	86	83	94	53,942	99	99	53,942	83	1
Galla .....	92	7,689	5	7,312	.....	83	91	17,478	99	99	17,478	85	2
Geauga .....	78	3,049	4	2,923	.....	79	91	8,219	106	106	8,219	85	2
Greene .....	38	31,554	34	26,824	77	79	95	53,704	104	104	53,704	92	2
Guernsey .....	65	9,310	1	9,217	100	87	97	14,170	101	101	14,170	93	2
Hamilton .....	76	8,272	15	7,001	100	89	125	14,127	115	115	14,127	89	2
Hancock .....	65	21,318	8	19,613	87	76	94	50,530	99	99	50,530	94	2
Hardin .....	59	6,254	24	7,733	80	79	84	34,449	108	108	34,449	88	1
Harrison .....	89	7,394	1	7,393	80	79	94	10,219	106	106	10,219	96	2
Henry .....	79	8,981	3	7,824	89	85	95	49,977	101	101	49,977	94	1
Highland .....	84	30,571	8	30,571	83	82	95	54,751	105	105	54,751	90	6
Hocking .....	81	9,567	.....	9,567	.....	95	95	12,069	103	103	12,069	80	8

21,559	98	21,777	91	96	92	22,332	3	21,332	91	Holmes
30,896	99	31,117	91	94	75	22,688	...	27,688	76	Huton
10,991	112	9,733	94	94	...	4,843	2	4,843	95	Jackson
11,043	104	10,318	93	93	...	7,323	1	7,323	96	Jefferson
31,903	100	31,893	95	99	...	21,432	2	21,432	97	Knox
6,225	104	5,986	93	87	...	1,078	1	1,078	98	Lake
11,379	86	13,231	93	104	...	1,632	...	1,632	97	Lawrence
43,067	86	43,236	93	93	...	21,687	8	22,353	96	Licking
53,270	101	51,718	93	97	...	3,376	52	22,353	95	Licking
25,271	103	26,053	93	93	...	13,643	6	13,643	81	Logan
63,831	104	61,378	96	86	...	2,987	1	3,092	89	Loran
21,679	106	20,647	97	92	...	15,321	6	16,789	89	Madison
63,831	104	61,378	96	91	...	11,718	1	11,718	81	Madison
25,271	103	26,053	93	89	...	9,576	1	11,336	80	Madison
41,632	99	42,053	91	83	...	10,408	8	10,408	96	Nation
21,657	101	21,443	93	93	...	15,879	1	16,039	99	Nation
11,579	101	11,464	91	87	...	8,067	...	8,067	87	Nelson
49,762	105	47,383	95	91	...	8,641	18	10,416	93	Nelson
52,571	106	50,008	95	100	...	13,275	52	27,667	44	Nelson
16,060	102	15,765	102	90	...	11,265	1	11,389	90	Monroe
44,094	103	42,810	103	67	...	17,905	23	25,219	56	Montgomery
24,697	87	23,661	104	81	...	8,671	3	8,671	91	Morgan
24,519	93	24,593	98	85	...	14,439	2	14,439	78	Morgan
21,330	100	21,990	97	88	...	9,853	3	8,727	85	Muskingum
44,979	100	44,979	99	91	...	2,784	11	3,123	81	Noble
77,439	106	76,471	99	94	...	12,436	...	12,436	92	Noble
75,573	109	69,333	89	92	...	53,371	1	53,371	61	Perry
24,347	100	24,347	98	96	...	12,670	1	12,670	82	Pickaway
13,726	102	13,457	98	75	...	13,061	2	13,328	95	Pike
56,240	108	52,074	110	96	...	24,061	31	34,866	81	Portage
48,685	97	48,028	85	75	...	11,834	8	12,863	52	Preble
53,697	97	53,697	85	76	...	21,417	6	22,784	63	Putnam
33,746	88	33,348	78	86	...	37,321	1	37,698	74	Richland
24,433	93	26,272	108	86	...	17,126	5	18,027	82	Ross
57,993	108	56,272	91	84	...	9,534	7	9,534	90	Sandusky
46,305	95	46,689	96	82	...	36,954	...	36,954	81	Seneca
61,063	104	59,089	99	63	...	10,342	30	99,735	63	Seneca
29,748	100	29,748	95	96	...	36,857	1	14,775	48	Shelby
14,349	101	14,207	90	96	...	16,896	1	36,724	83	Shelby
12,307	104	11,834	91	73	...	6,240	2	17,067	80	Starke
18,464	100	18,464	93	68	...	17,662	2	6,367	84	Summit
46,611	104	43,860	93	89	...	6,711	1	17,840	82	Trumbull
49,179	100	49,179	86	81	...	5,0	9	6,276	70	Tuscarawas
49,179	100	49,179	86	81	...	5,0	9	6,276	70	Tuscarawas
100,153	103	100,153	108	100	...	6,064	54	11,008	48	Van Wert
44,696	108	44,696	108	109	...	4,243	3	4,379	99	Vinton
17,472	100	17,472	100	106	...	20,831	19	26,705	69	Warren
35,029	99	35,029	92	90	...	12,094	...	12,094	87	Washington
30,134	103	30,134	99	90	...	42,350	...	42,350	96	Wayne
92,871	106	92,871	91	96	...	8,576	12	9,744	80	Williams
31,875	98	31,875	96	83	...	11,924	14	13,865	75	Wood
31,875	98	31,875	96	83	...	14,786	5	15,564	81	Wyandot
2,575,814	102	2,505,886	96	85	...	1,296,096	9	1,446,543	77	Averages Totals

## REPORT ON THE AREA AND PROSPECTS OF WHEAT, CORN, POTATOES AND OTHER CROPS, JULY 1, 1909—Concluded.

Counties.	Clover.	Potatoes.				Tobacco.	Timothy.	Pastures.	Horses.	Colts.	Cattle.	Calves.	Wool.
		Area in 1908.	Area planted this year com- pared with 1908.	Estimated area for 1909.	Prospect com- pared with an average.	Per cent.	Per cent.	Per cent.	Condition com- pared with an average.	Number com- pared with an average.	Condition com- pared with an average.	Number com- pared with an average.	Clip compared with last year.
	Per cent.	Acres.	Per cent.	Acres.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Adams .....	5	284	98	278	105	183	97	113	100	106	98	98	87
Allen .....	.....	538	98	516	105	178	97	105	100	106	98	98	87
Ashland .....	.....	889	99	880	98	.....	95	105	100	98	98	98	90
Ashabula .....	.....	3,407	105	3,577	94	.....	83	97	94	98	97	91	100
Athens .....	1	458	105	479	102	.....	90	97	96	97	97	95	103
Auglaize .....	.....	919	98	901	79	.....	88	101	98	97	98	95	102
Belmont .....	2	929	102	948	101	126	79	96	101	97	94	93	98
Brown .....	2	354	102	351	103	216	100	109	101	98	101	93	99
Butler .....	5	1,450	100	1,580	91	98	85	102	94	92	94	93	98
Carroll .....	2	656	100	656	86	.....	78	95	103	101	98	93	98
Champaign .....	2	215	97	209	89	120	84	100	99	101	98	93	98
Clark .....	4	1,074	106	1,138	90	.....	90	108	98	101	98	93	102
Clermont .....	.....	821	115	862	115	283	98	108	96	101	100	93	93
Columbiana .....	1	182	102	187	94	96	97	95	99	98	97	93	91
Coahuila .....	1	1,033	109	2,855	103	.....	85	94	93	95	100	93	94
Crawford .....	2	1,067	103	1,033	95	.....	87	94	94	93	95	93	93
Cuyahoga .....	1	5,636	103	5,423	76	.....	83	94	93	95	96	93	91
Darke .....	5	872	95	898	103	.....	86	101	98	98	97	91	100
Defiance .....	3	633	89	563	99	99	89	93	89	92	91	87	89
Delaware .....	2	584	105	613	77	.....	102	95	95	93	90	90	90
Erie .....	5	3,498	100	3,498	95	.....	93	102	99	94	100	90	102
Fairfield .....	1	833	97	779	89	75	78	97	99	102	100	100	92
Fayette .....	2	10	100	10	86	.....	86	95	97	96	98	86	85
Franklin .....	1	1,708	97	1,657	98	.....	95	96	100	97	98	88	87
Fulton .....	1	927	102	946	88	.....	82	92	91	93	96	93	93
Galla .....	1	225	96	218	90	185	86	89	92	96	96	97	93
Greene .....	4	2,896	99	2,867	99	.....	82	101	98	98	100	93	89
Guernsey .....	1	796	101	804	103	.....	93	98	96	97	97	93	87
Hamilton .....	2	491	105	520	98	92	86	96	94	88	87	94	89
Hancock .....	1	3,910	107	4,194	112	150	115	120	92	111	100	100	83
Hardin .....	2	806	97	787	88	.....	95	102	98	97	99	96	98
Harlan .....	.....	1,153	98	1,153	78	.....	95	100	97	97	101	99	103
Henry .....	2	624	96	591	98	.....	79	85	99	98	96	97	98
Highland .....	5	118	101	119	91	107	84	99	91	84	83	87	87

Hocking	107	675	107	95	79	98	96	87	93	84	94	94
Holmes	107	535	95	101	88	94	100	90	100	84	103	103
Huron	1	1,370	96	93	91	101	96	89	96	84	97	97
Jackson	113	217	102	93	79	104	98	91	100	85	98	98
Jefferson	2	709	102	93	88	104	98	91	100	85	98	98
Knox	3	1,241	100	89	79	98	96	88	94	93	97	97
Lake	3	1,910	106	92	83	96	94	100	100	86	91	91
Lawrence	3	356	134	100	104	112	106	140	100	86	96	96
Licking	1	1,125	94	85	83	93	93	91	96	86	95	95
Lorain	2	491	100	93	93	97	92	81	96	86	95	95
Lucas	2	1,986	101	80	91	97	102	79	98	96	89	89
Madison	1	3,297	100	98	94	98	94	102	99	96	99	99
Mahoning	1	228	101	91	89	101	100	101	101	91	94	94
Marion	4	2,327	108	96	89	99	96	86	96	87	96	96
Medina	3	662	93	88	86	95	92	86	96	86	96	96
Melara	2	3,510	101	88	86	96	96	92	96	86	96	96
Melara	103	678	103	88	86	96	96	92	96	86	96	96
Mercer	1	461	105	100	86	99	98	98	96	86	96	96
Miami	1	974	102	95	97	103	96	99	96	86	96	96
Montgomery	1	1,292	100	101	91	101	96	100	96	86	96	96
Monroe	1	826	100	99	86	101	96	100	96	86	96	96
Morgan	1	395	105	95	92	100	98	103	96	86	96	96
Morrow	1	1,157	111	90	92	102	98	98	96	86	96	96
Muskingum	1	1,389	102	89	86	95	94	94	96	86	96	96
Noble	1	641	94	91	90	100	97	99	96	86	96	96
Ottawa	2	665	98	81	87	96	97	99	96	86	96	96
Paulding	1	274	98	85	89	98	98	98	96	86	96	96
Perry	3	536	104	95	78	100	96	96	96	86	96	96
Pickaway	1	198	111	91	92	96	96	96	96	86	96	96
Pike	1	560	95	90	90	90	96	96	96	86	96	96
Portage	1	6,724	99	94	80	97	97	98	96	86	96	96
Preble	2	252	102	101	102	97	100	97	96	86	96	96
Putnam	2	971	84	74	82	83	86	83	81	81	81	81
Richland	6	2,159	99	91	89	99	96	89	88	82	82	82
Ross	2	843	105	98	85	100	92	90	96	82	82	82
Sandusky	5	2,352	84	67	91	90	85	86	96	82	82	82
Schozo	1	1,125	101	97	96	98	94	91	94	91	94	94
Seneca	1	1,782	92	76	83	97	92	91	94	94	94	94
Shelby	2	738	102	94	85	96	96	96	96	87	87	87
Stark	2	4,392	102	92	68	85	91	88	94	88	88	88
Summit	2	3,682	102	92	86	96	96	88	96	88	88	88
Tuscarawas	1	2,821	107	89	86	96	96	86	96	88	88	88
Union	1	1,668	103	90	99	99	96	90	93	87	87	87
Van Wert	1	239	92	84	84	95	95	79	90	90	90	90
Vinton	3	837	102	103	93	114	100	103	100	100	100	100
Warren	1	333	100	101	97	104	94	107	100	100	100	100
Washington	1	791	105	99	95	105	98	95	96	96	96	96
Wayne	1	1,955	99	95	83	96	96	93	96	96	96	96
Williams	1	6,254	95	95	94	97	100	92	94	94	94	94
Williams	10	556	98	88	94	97	100	92	94	94	94	94
Wood	1	993	91	88	91	100	96	96	96	96	96	96
Wyandot	1	449	91	88	88	100	96	96	96	96	96	96
Average	2	115,534	99	93	88	98	96	94	96	83	97	97
Total	2	115,534	99	93	88	98	96	94	96	83	97	97

## Crop Statistics, October 1, 1909

This report presents the first official estimates made in bushels of the grain crops harvested this year, and which are made from the results of actual threshing reported by the regular correspondents throughout the several townships of the state. The condition or prospect of crops not given in bushels is by percentage comparison with a full average:

WHEAT—Estimated area harvested.....	1,711,047 acres
“ —Product per acre estimated from threshers' returns.....	16 bushels
“ —Total estimated product for 1909.....	27,355,142 bushels
“ —Quality compared with an average.....	87 per cent.
“ —Crop of 1908 still in producers' hands.....	10 per cent.
OATS—Area as returned by township assessors.....	1,592,167 acres
“ —Product per acre as estimated from threshers' returns.....	32 bushels
“ —Total estimated product for 1909.....	51,284,720 bushels
“ —Quality compared with an average.....	91 per cent.
BARLEY—Fall and spring:	
“ —Area as returned by township assessors.....	21,622 acres
“ —Product per acre estimated from threshers' returns.....	22.3 bushels
“ —Total estimated product for 1909.....	493,365 bushels
“ —Quality compared with an average.....	89 per cent.
RYE—Area as returned by township assessors.....	58,376 acres
“ —Product per acre estimated from threshers' returns.....	16.2 bushels
“ —Total estimated product for 1909.....	946,569 bushels
“ —Quality compared with an average.....	92 per cent.
CORN—Prospect compared with an average.....	87 per cent.
“ —Cut up for fodder.....	78 per cent.
“ —Average date for cutting for fodder.....	September 18
POTATOES—Total yield compared with an average.....	89 per cent.
TOBACCO—Condition compared with an average.....	97 per cent.
PASTURES—Condition compared with an average.....	89 per cent.
APPLES—Prospect compared with an average.....	45 per cent.

Ohio's wheat area for current year's harvest as reported by the township assessors was 1,711,047 acres. Official correspondents of this Department now estimate that the average yield per acre was 16 bushels, giving a production of 27,355,142 bushels for the state as a whole. Compared with the harvest of 1908 this is a shortage of 1,600,354 bushels. The average yield per acre this season is slightly in excess of that of last year, but the exceedingly low acreage harvested has reduced the general production. For the past five years, not including the present harvest,

Ohio's wheat production has been as follows: 1904, 21,090,222 bushels; 1905, 32,462,786 bushels; 1906, 39,279,680 bushels; 1907, 30,918,367 bushels; 1908, 28,955,496 bushels. These figures clearly indicate that Ohio's wheat acreage must necessarily be greatly increased should it hope to produce a normal crop. The quality of the grain varies greatly over the state, the general average being estimated at 87 per cent. Reports show that 10 per cent. of the crop of 1908 remains in producers' hands. In many sections of the state wheat seeding has been completed, while a large number of correspondents report this work as being retarded by dry weather and the late maturing of corn. Where the plant is showing above ground the reports are generally most favorable as to its condition. Some few correspondents note the fact that an unusually large acreage has been sown for next year's harvest, but unless the acreage is materially increased the 1910 production will show no great improvement over that of the present season.

The estimated area seeded to oats, as shown by the township assessors' returns, was 1,592,167 acres, and from this area has been produced 51,284,720 bushels, an average yield of 32 bushels per acre. Compared with the harvest of 1908 this is an increase of 16,920,740 bushels. The acreage harvested far exceeds that of the previous year, due principally to the failure of wheat. The quality of the grain is satisfactory, being estimated at 91 per cent. compared with an average.

Rye shows a production of 946,569 bushels for the state as a whole.

Corn prospects are estimated at 87 per cent. compared with an average. Early frosts are reported generally over the state, but no material damage has resulted. The present corn area being greater than that of last year, together with a more promising prospect reported than on the corresponding date of 1908, should result in an increased harvest.

It is estimated that the yield of potatoes will equal 89 per cent. of an average.

Apple prospects are estimated at 45 per cent. compared with an average.

## AGRICULTURAL REPORT.

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE ACREAGE AND PRODUCT OF WHEAT, OATS, BARLEY AND RYE AND THE CONDITION OF OTHER CROPS, OCTOBER 1, 1908.

Counties.	Wheat.					Oats.				
	Estimated area harvested.	Product per acre estimated from threshers' returns.	Total estimated product for 1908.	Quality compared with an average.	Crop of 1908 still in producers' hands.	Area as returned by township assessors.	Product per acre estimated from threshers' returns.	Total estimated product for 1908.	Quality compared with an average.	Per cent.
	Acres.	Bushels.	Per cent.	Per cent.	Per cent.	Acres.	Bushels.	Bushels.	Per cent.	
Adams .....	16,828	11	92	23	991	23	22,793	97		
Allen .....	13,023	13	85	2	24,430	25	635,180	92		
Ashland .....	26,092	18	98	4	20,460	35	715,750	99		
Ashtabula .....	4,898	19	92	3	26,538	34	902,292	98		
Athens .....	5,598	17	99	3	1,175	29	34,075	95		
Auglaize .....	26,273	17	86	6	28,182	26	732,732	81		
Belmont .....	14,002	13	92	14	9,213	27	248,751	97		
Brown .....	17,768	13	92	3	4,001	25	104,026	92		
Butler .....	40,937	12	58	22	15,452	30	483,580	83		
Carroll .....	14,101	15	89	6	31,831	27	353,241	86		
Champaign .....	18,813	12	64	50	10,595	25	795,775	90		
Clark .....	21,408	18	100	17	4,467	28	286,680	90		
Clermont .....	13,072	16	82	17	17,897	34	151,674	95		
Columbiana .....	24,086	16	98	2	11,293	29	519,013	95		
Crawford .....	19,417	17	90	1	24,842	37	827,178	96		
Coshocton .....	23,036	17	90	12	11,610	43	893,154	98		
Cuyahoga .....	22,574	25	97	15	52,433	30	499,230	75		
Darke .....	1,593	13	75	15	36,836	30	1,572,840	75		
Defiance .....	38,060	17	73	10	10,064	23	1,076,580	93		
Delaware .....	14,168	14	89	6	16,808	34	251,792	94		
Erle .....	12,424	21	82	16	2,650	26	637,472	75		
Fairfield .....	43,064	15	72	15	2,621	35	79,500	75		
Fayette .....	28,044	15	89	13	3,154	29	65,546	81		
Franklin .....	23,733	13	94	21	28,261	39	238,004	96		
Fulton .....	13,701	22	87	7	1,568	23	1,102,179	96		
Gallia .....	10,157	13	98	11	17,004	23	29,164	96		
Geauga .....	3,974	17	88	11	12,882	29	663,156	97		
Greene .....	30,361	11	70	12	5,075	27	334,314	93		
Guernsey .....	11,265	13	83	12	3,697	28	142,100	89		
Hamilton .....	15,119	14	71	5	25,413	36	129,386	89		
Hancock .....	27,702	14	82	3	19,070	25	690,738	96		
Hardin .....	6,806	14	84	13	7,524	27	511,890	93		
Harrison .....	8,627	14	94	9	39,797	28	195,624	96		
Henry .....	20,638	19	84	2	2,142	36	1,432,692	82		
Highland .....	30,984	15	86	24	1,139	27	57,894	87		
Hocking .....	9,903	15	86	24	1,139	22	25,056	87		



Holmes	23,710	474,200	96	35	17,870	32	571,840	92
Huron	28,767	603,897	94	9	33,187	35	1,161,645	95
Jackson	6,103	85,442	87	10	671	21	14,081	94
Jefferson	9,870	167,790	91	14	10,656	28	281,640	94
Knox	26,547	461,289	88	7	11,634	29	334,485	88
Lake	2,182	32,730	92	1	9,188	33	303,204	95
Lawrence	1,946	25,288	86	21	1,376	18	24,760	91
Licking	26,210	419,360	87	7	10,128	26	283,328	85
Logan	11,683	128,613	70	12	82,030	32	2,624,960	84
Lorain	13,640	272,800	95	11	24,013	36	912,494	95
Lucas	5,957	150,262	101	13	16,196	33	583,056	94
Madison	18,867	245,271	83	14	38,613	28	1,078,364	91
Mahoning	14,394	272,346	96	8	15,696	37	680,762	96
Marion	13,304	180,060	78	19	28,667	36	1,028,412	84
Medina	22,638	543,312	99	8	22,198	42	932,316	96
Melara	10,585	179,936	96	3	1,286	27	87,665	93
Mercer	30,539	237,479	76	36	43,821	28	1,212,988	93
Miami	31,912	362,743	71	6	5,874	32	1,063,696	97
Monroe	28,657	166,768	67	22	19,268	25	148,350	96
Montgomery	9,620	371,241	89	4	2,079	30	578,040	87
Morgan	16,866	153,920	93	13	18,509	27	56,133	96
Muskingum	19,339	284,946	92	20	5,840	32	582,288	89
Noble	9,726	348,102	92	1	2,509	30	176,200	91
Ottawa	8,926	136,164	90	3	16,382	30	327,640	92
Paulding	7,621	133,890	88	4	55,819	37	2,065,368	96
Perry	13,966	114,316	74	4	1,993	24	47,832	84
Pickaway	51,983	181,553	96	9	1,435	27	58,746	85
Pike	13,630	987,677	87	36	1,153	23	28,619	79
Portage	18,557	190,820	99	12	19,912	31	786,744	99
Preble	37,035	352,583	68	12	15,311	37	474,641	94
Putnam	22,935	370,350	74	18	29,674	36	1,033,590	94
Richland	30,518	298,155	92	13	27,676	32	882,432	94
Ross	41,662	686,592	82	13	1,136	34	38,624	84
Sandusky	29,871	627,291	92	2	28,600	39	1,115,400	92
Scioto	12,987	168,331	88	14	1,503	25	37,576	88
Seneca	46,464	536,352	86	16	22,327	33	1,066,791	92
Shelby	26,447	317,364	70	10	11,049	29	1,190,421	82
Stark	42,646	810,274	95	2	31,761	34	1,079,874	83
Summit	19,960	439,120	94	5	18,320	36	689,520	90
Trumbull	8,853	135,913	98	1	18,441	33	606,553	95
Tuscarawas	21,763	389,971	93	14	16,914	28	473,592	92
Union	9,896	138,404	81	2	19,301	27	521,127	87
Van Wert	11,909	142,908	65	17	41,677	37	1,542,049	100
Vinton	4,814	72,210	92	1	714	26	18,564	90
Warren	23,744	261,184	53	1	10,704	32	342,628	90
Washington	16,041	270,738	99	1	6,006	28	140,140	90
Wayne	47,691	1,049,202	99	6	32,477	36	1,168,172	93
Williams	16,783	335,760	84	2	27,886	36	1,008,896	96
Wood	18,778	362,004	80	2	64,276	30	1,928,280	96
Wyandot	23,346	420,210	86	21	23,102	44	1,016,488	93
Average per cent.	1,711,047	27,366,142	87	10	1,692,167	32	51,284,720	91
Totals	1,711,047	27,366,142	87	10	1,692,167	32	51,284,720	91

## AGRICULTURAL REPORT.

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE ACREAGE AND PRODUCT OF WHEAT, OATS, BARLEY  
AND RYE AND THE CONDITION OF OTHER CROPS, OCTOBER 1, 1909.

Counties.	Barley.					Rye.				
	Area of winter and spring as returned by township assessors.	Product per acre estimated from threshers' returns.	Total estimated product for 1909.	Quality compared with an average.	Area as returned by township assessors.	Product per acre estimated from threshers' returns.	Total estimated product for 1909.	Quality compared with an average.		
	Acres.	Bushels.	Bushels.	Per cent.	Acres.	Bushels.	Bushels.	Per cent.		
Adams .....	2	20	40	90	738	13	9,594	97		
Allen .....	673	11	7,403	83	2,782	15	41,730	95		
Ashland .....	34	25	850	97	392	16	6,272	95		
Ashabula .....	1	22	22	95	899	16	14,394	92		
Athens .....	18	25	450	90	39	16	624	100		
Auglaize .....	107	35	3,745	95	599	18	10,782	97		
Belmont .....	48	30	1,440	96	153	15	2,445	95		
Brown .....	6	24	144	92	4,352	14	61,348	98		
Butler .....	720	25	18,720	87	85	12	2,700	90		
Carroll .....	4	25	100	90	1,072	13	1,105	100		
Champaign .....	44	20	880	95	1,046	15	16,080	75		
Clark .....	119	24	2,856	96	2,197	25	54,925	95		
Clermont .....	52	21	1,032	91	3,148	19	59,812	100		
Columbiana .....	10	15	180	90	235	14	3,304	97		
Coshocton .....	8	22	176	93	232	15	3,480	98		
Crawford .....	141	18	2,538	100	128	12	1,536	93		
Cuyahoga .....	33	30	1,140	100	531	23	13,363	95		
Cuyahoga .....	65	21	1,365	95	1,095	13	14,285	90		
Carle .....	1,287	20	25,740	81	971	18	5,778	97		
Delaware .....	23	22	576	90	1,538	13	91,122	97		
Delaware .....	23	23	576	100	831	19	7,233	95		
Erie .....	236	32	6,573	85	338	17	15,922	90		
Fairfield .....	6	32	160	100	285	17	5,715	95		
Fayette .....	20	40	800	95	1,400	18	25,200	93		
Franklin .....	20	25	500	95	982	18	15,636	100		
Fulton .....	1,664	24	39,556	91	67	13	871	88		
Gallia .....		25	500	100	228	14	3,182	93		
Geauga .....	20	21	661	96	1,103	12	13,236	97		
Greene .....	81	21	828	75	310	13	4,030	90		
Guernsey .....	36	23	1,456	86	12	17	204	91		
Hamilton .....	41	35	2,365	95	823	14	11,522	98		
Hancock .....	310	29	8,990	96	1,239	15	19,485	94		
Hardin .....	157	15	2,355	96	53	18	854	92		
Harrison .....	29	22	638	89	524	17	8,908	90		
Henry .....	2,579	25	64,475	89	2,082	13	26,416	94		
Highland .....	17	20	340	95	71	16	1,136	92		
Hocking .....										

Holmes	14	32	418	100	337	14	4,718	93
Huron	120	18	2,160	90	295	17	4,505	93
Jackson	17	23	374	92	40	13	520	100
Jefferson	13	20	280	100	73	17	1,241	87
Knox	20	21	420	93	678	16	10,816	68
Lake	60	24	1,440	82	825	15	12,375	68
Lawrence	167	18	3,006	81	13	17	221	93
Licking	166	30	4,950	88	2,998	15	44,970	93
Logan	155	27	3,962	83	1,714	17	29,138	91
Lucas	1,428	26	38,502	90	782	20	6,200	96
Madison	53	15	1,325	90	381	19	14,658	96
Mahoning	12	15	330	97	410	18	6,858	100
Marion	33	21	693	85	206	17	6,870	97
Medina	33	20	40	82	699	15	8,098	78
Melba	2	23	22,264	75	105	24	12,776	86
Mercer	968	19	10	90	404	20	2,100	97
Miami	5	15	125	90	222	15	5,282	80
Monroe	1	15	35	91	212	15	3,480	80
Montgomery	168	35	5,680	90	412	22	6,964	93
Morgan	2	22	15	83	171	15	6,630	91
Morrow	5	20	130	85	687	17	1,207	98
Muskingum	11	26	221	97	11,679	17	11,679	98
Noble	915	21	13,725	100	364	13	4,732	92
Ottawa	382	15	5,730	90	104	14	1,466	84
Paulding	21	20	420	86	347	16	5,205	96
Perry	4	20	88	88	210	12	10,116	94
Pickaway	4	22	88	83	313	16	4,200	96
Portage	83	20	2,883	90	148	16	5,008	90
Preble	2,369	31	36,636	70	170	20	2,960	90
Putnam	46	15	1,288	81	220	15	4,050	100
Richland	97	23	2,425	97	1,073	14	3,080	100
Ross	834	25	12,024	92	644	16	17,108	80
Sandusky	63	36	1,336	98	1,003	18	8,160	97
Scioto	19	22	380	92	615	24	18,054	82
Seneca	19	20	380	92	157	15	2,305	92
Shelby	7	20	126	90	34	20	680	100
Stark	16	18	304	92	253	12	3,096	95
Summit	9	19	190	90	312	12	6,973	99
Trumbull	2	20	34	88	314	19	5,024	87
Tuscarawas	25	17	400	90	488	16	8,296	100
Union	2,146	16	61,604	88	235	14	3,290	96
Van Wert	2	24	36	91	2,100	12	25,200	97
Vinton	169	18	3,698	92	1,492	17	25,364	98
Warren	39	22	88	90	7	16	112	95
Washington	1,033	17	780	85	1,583	15	23,775	60
Wayne	1,217	20	42,075	90	185	14	2,690	90
Williams	38	25	37,410	96	156	20	3,120	90
Wood	38	30	760	91	296	10	2,960	90
Wyandot	38	20	760	95	335	25	8,375	88
Average per cent.	21.62	22.3	493.366	89	58.376	16.2	8,800	96
Totals	21,622	22.3	493,366	89	58,376	16.2	946,569	92

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE ACREAGE AND PRODUCT OF WHEAT, OATS, BARLEY  
AND RYE AND THE CONDITION OF OTHER CROPS, OCTOBER 1, 1908.

Counties.	Corn.			Potatoes.	Tobacco.	Pastures.	Apples.
	Prospect com- pared with an average.	Cut up for food- der.	Date of cut- ting for food- der. days lat- er Sept. 1st.	Probable total yield com- pared with an average.	Condition compared with an aver- age.	Condition compared with an aver- age.	Prospect com- pared with an average.
	Per cent.	Per cent.	Days.	Per cent.	Per cent.	Per cent.	Per cent.
Adams .....	90	72	23	106	117	83	50
Allen .....	79	82	17	68	117	72	57
Ashland .....	93	76	19	92	110	102	34
Ashtabula .....	86	38	14	82	102	86	26
Athens .....	96	71	16	100	102	83	63
Auglaize .....	85	54	19	80	95	84	42
Belmont .....	92	86	25	93	91	68	70
Brown .....	94	42	19	96	92	100	94
Butler .....	96	26	14	138	150	102	50
Carroll .....	82	73	25	86	100	86	24
Champaign .....	104	83	16	94	100	102	57
Clark .....	95	87	18	75	100	97	75
Clermont .....	100	90	10	110	100	90	90
Clinton .....	95	72	18	125	80	92	44
Columbiana .....	83	96	24	81	88	68	48
Conneaut .....	94	94	21	84	96	96	16
Crawford .....	87	75	22	62	96	31	31
Cuyahoga .....	91	57	21	109	85	94	43
Darke .....	90	80	19	88	85	90	70
Defiance .....	80	88	15	82	88	74	49
Delaware .....	97	89	16	53	88	88	56
Erie .....	75	84	21	83	83	97	42
Fairfield .....	88	98	20	88	88	98	37
Fayette .....	90	90	15	130	88	103	10
Franklin .....	89	87	15	107	80	84	49
Fulton .....	91	90	16	99	104	87	45
Gallia .....	87	77	13	96	104	88	42
Geauga .....	83	87	18	88	100	84	39
Greene .....	80	98	24	85	100	83	69
Guernsey .....	87	77	17	95	83	98	31
Hamilton .....	87	72	10	110	83	83	56
Hancock .....	76	70	17	75	83	66	35
Hardin .....	76	51	17	72	81	74	51
Harrison .....	86	80	23	83	81	81	38
Henry .....	85	64	18	79	86	99	33
Highland .....	93	79	19	133	86	99	49
Hocking .....	86	83	16	96	86	98	51

Holmes	100	85	17	94	100	43
Huron	92	76	18	83	98	19
Jackson	86	98	15	92	97	32
Jefferson	92	97	21	71	70	27
Knox	91	83	17	67	99	29
Lake	84	62	17	92	86	62
Lawrence	77	56	14	97	79	57
Licking	88	91	12	82	97	62
Logan	89	93	16	81	94	61
Lorain	89	62	22	79	97	61
Lucas	82	89	14	75	53	40
Madison	86	63	14	105	96	50
Mahoning	81	58	21	74	61	15
Marion	88	73	16	76	97	18
Medina	81	79	21	81	92	30
Melms	80	98	19	85	78	81
Mercer	81	77	17	95	98	69
Miami	98	61	17	109	113	83
Montroe	94	100	17	103	88	64
Montgomery	87	78	16	87	98	59
Morgan	88	97	20	90	94	42
Morrow	93	91	20	88	96	21
Muskingum	95	90	22	100	89	38
Noble	76	95	21	88	94	53
Ottawa	75	67	13	55	77	20
Paulding	82	82	19	80	94	34
Perry	92	94	17	103	98	46
Pickaway	85	94	11	94	77	51
Pike	91	94	23	94	102	35
Portage	74	78	22	76	86	14
Pueblo	95	87	22	129	101	15
Putnam	87	68	13	72	87	28
Richard	87	91	21	73	98	33
Ross	96	76	16	114	97	69
Sandusky	97	98	20	83	94	37
Scioto	97	80	20	108	111	83
Seneca	80	83	16	83	89	47
Shelby	89	89	20	91	81	21
Stark	83	61	22	87	100	22
Summit	83	66	24	86	94	23
Trumbull	80	61	21	53	55	60
Tuscarawas	92	94	22	78	78	32
Union	88	82	17	96	99	85
Van Wert	72	91	17	79	88	20
Vinton	97	100	16	105	96	20
Warren	93	77	15	108	103	43
Washington	86	68	16	106	91	96
Wayne	96	89	23	78	100	39
Williams	77	96	20	77	83	53
Wood	71	89	14	62	57	18
Wyandot	86	94	17	71	91	19
Average per cent.	87	78	Sept. 18	89	97	45
Totals						

# CROP STATISTICS

November 1, 1909

The following report indicates the acreage and condition of the crops named, as computed from the returns received from the official crop and live stock correspondents of the Department:

Wheat—Area sown last fall as returned by township assessors.....	1,711,047 acres
“ —Sown this fall compared with last year.....	101 per cent.
“ —Estimated area seeded for the harvest of 1909.....	1,721,030 acres
“ —Condition compared with an average.....	83 per cent.
“ —Average date of seeding.....	September 27
Alfalfa—Area in 1908 as returned by township assessors.....	16,236 acres
“ —Area compared with last year.....	95 per cent.
“ —Estimated area in 1909.....	15,518 acres
“ —Total tons produced per acre from all cuttings.....	3
“ —Total estimated product for 1909.....	48,927 tons
“ —Number of cuttings this year.....	3
Rye—Area sown last fall as returned by township assessors.....	58,376 acres
“ —Sown this fall compared with last year.....	91 per cent.
“ —Estimated area seeded for the harvest of 1910.....	53,269 acres
“ —Condition compared with an average.....	87 per cent.
Corn—Prospect compared with an average.....	90 per cent.
Buckwheat—Prospect compared with an average.....	87 per cent.
Clover Seed—Prospect compared with an average.....	48 per cent.
Potatoes—Area planted as returned by township assessors.....	132,013 acres
“ —Average product per acre.....	94 bushels
“ —Total estimated product for 1909.....	12,371,015 bushels
“ —Affected by rot.....	2 per cent.
Hogs—Condition compared with an average.....	94 per cent.
“ —Number to be fattened compared with 1908.....	76 per cent.
Commercial Fertilizers—On what per cent. of wheat ground used...	65 per cent.

Ohio's wheat area for the 1910 harvest, as estimated by the official correspondents of this Department, shows but a small increase over the original area sown for the harvest just past, being reported at 1,721,030 acres, as against 1,711,047 acres last year. The area seeded is such that even though the yield per acre should be far above an average, Ohio cannot hope to produce a normal crop. The condition of the growing plant is estimated at 83 per cent., compared with an average. Early sown wheat is in a promising condition, but a greater part of the area was seeded late, and on many fields the plant is just appearing above ground, while reports of its poor condition are general over the state. Cool weather has

seriously retarded its growth, and should we have an early winter there is grave danger that the plant will not have attained sufficient strength and growth to withstand its rigors.

The statistics on alfalfa show that the total estimated production this year was 12,134 tons in excess of the crop of 1908. The average number of cuttings and the average production per acre are the same as reported last year.

The area seeded to rye is estimated at 53,269 acres, 91 per cent., in comparison with the area seeded for the 1908 harvest.

Corn prospects show an improvement of 3 per cent. during the past month, being estimated at 90 per cent., compared with an average. While some correspondents report that the crop is not husking out as well as anticipated, the results generally as to quality and quantity are most satisfactory, and the total production will exceed that of last year.

The total production of potatoes for the state is estimated at 12,371,015 bushels. Compared with last year this is an increase of approximately three million bushels.

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE AREA OF WHEAT AND RYE, AREA AND PRODUCTION OF ALFALFA AND POTATOES AND THE CONDITION OF OTHER CROPS, NOVEMBER 1, 1909.

Counties.	Wheat.					Alfalfa.					Number of cuttings this year.
	Area sown last fall as re- turned by township assessors.	Sown this fall compared with last year.	Estimated area seeded for the harvest of 1910.	Condition com- pared with an average.	When sown days after September 15.	Area in 1908 as returned by township assessors.	Area compared with last year.	Estimated area in 1909.	Total tons pro- duced per acre from all cuttings.	Total estimat- ed product for 1909.	
	Acres.	Per cent.	Acres.	Per cent.		Acres.	Per cent.	Acres.	Tons.	Tons.	
Adams	16,823	97	16,323	90	24	73	90	66	4	280	3
Allen	13,023	96	12,502	93	12	183	93	175	3	525	3
Ashland	26,062	107	27,918	95	5	16	160	24	3	48	2
Ashtabula	4,898	110	5,387	97	7	7	100	7	3	21	2
Athens	5,598	100	5,598	70	27	365	.....	.....	.....	.....	.....
Auglaize	26,273	107	28,112	89	10	341	87	297	2	594	3
Beltmont	14,002	104	14,562	70	13	60	.....	.....	.....	.....	.....
Brown	40,937	102	45,030	79	16	144	107	154	3	462	2
Butler	17,788	110	18,123	97	13	830	94	780	4	3,120	3
Carroll	14,101	97	13,677	83	8	2	150	3	4	9	3
Champaign	18,813	80	14,960	80	10	793	100	793	3	3,172	3
Clark	21,408	92	19,696	82	20	313	117	366	4	1,098	3
Clermont	13,072	115	15,032	87	23	846	100	846	3	2,538	3
Columbiana	34,096	97	33,063	77	19	178	101	180	4	78	3
Columbia	19,417	102	19,806	81	6	21	125	25	3	112	3
Coshocton	23,036	98	22,575	84	16	73	77	56	2	32	3
Crawford	22,574	99	22,318	94	6	6	.....	.....	.....	.....	.....
Cuyahoga	1,593	112	1,754	96	12	8	100	8	4	32	3
Darke	38,060	85	32,342	77	9	185	79	146	3	584	3
DeLance	14,168	101	14,309	79	9	50	100	50	3	150	3
Delaware	14,798	102	15,092	71	17	236	98	231	3	693	3
Erle	12,424	106	13,189	90	5	149	80	119	3	238	3
Fairfield	43,064	102	43,926	89	16	36	100	36	3	180	3
Fayette	26,853	103	27,443	83	11	70	85	60	3	180	3
Franklin	28,853	97	27,861	80	18	378	82	308	3	924	3
Fulton	12,701	104	13,208	92	5	276	91	251	3	753	3
Gallia	10,157	99	10,056	86	22	32	108	35	4	140	3
Geauga	3,974	105	4,172	92	10	11	142	16	3	48	3
Greene	30,981	100	30,981	70	17	354	100	354	3	140	3
Guernsey	11,555	104	11,705	69	18	83	100	45	3	1,062	3
Hamilton	15,119	101	15,270	80	18	1,627	100	1,627	3	135	3
Hancock	27,702	105	29,087	87	13	1,627	105	1,597	3	4,581	3
Hardin	6,806	116	7,886	81	10	148	117	173	3	192	3
Harrison	8,627	101	8,713	81	11	40	100	40	3	619	3
Henry	20,633	98	20,235	58	8	40	73	49	3	120	3
Highland	30,984	105	29,434	75	17	307	75	230	3	147	3
Hocking	9,903	101	10,002	75	17	46	96	44	3	920	3
Holmes	23,710	97	22,998	86	10	46	96	44	3	220	3



	103	28,757	103	29,619	96	5	37	87	32	4	128	3
Huron .....	108	6,108	108	6,489	79	22	8	100	19	3	57	3
Jackson .....	108	9,870	98	9,416	66	9	19	100	19	3	57	3
Knox .....	108	26,547	108	26,671	88	12	86	100	19	3	57	3
Lake .....	90	2,182	90	1,964	66	10	86	100	19	3	57	3
Lawrence .....	125	1,446	125	2,432	83	20	89	87	77	3	154	3
Licking .....	97	26,210	97	26,424	82	12	1,397	87	1,432	3	4,446	3
Logan .....	84	11,883	84	9,814	64	11	45	125	86	3	224	3
Lorain .....	109	13,640	109	14,868	101	7	362	100	362	4	1,086	3
Lucas .....	71	6,367	71	8,808	71	12	420	108	433	3	1,289	3
Madison .....	96	13,897	96	18,112	92	12	2	96	17	3	51	3
Maioning .....	97	13,904	97	13,904	81	11	18	96	17	3	51	3
Marion .....	97	10,536	97	10,536	89	11	24	96	16	3	32	3
Medina .....	104	22,638	104	23,644	97	6	15	108	13	4	64	3
Meigs .....	94	10,636	94	9,940	82	16	132	100	182	3	546	3
Mercer .....	102	21,689	102	22,020	94	6	132	100	182	4	436	3
Miami .....	130	30,229	130	38,297	94	12	120	91	109	4	436	3
Montgomery .....	102	11,912	102	12,140	77	12	1,070	96	1,017	3	3,061	3
Monroe .....	91	23,657	91	25,987	73	19	73	73	53	3	159	3
Morgan .....	99	9,620	99	9,620	86	21	54	100	64	4	216	3
Morrow .....	104	16,208	104	16,208	91	9	69	100	68	3	204	4
Muskingum .....	111	19,339	111	21,466	86	16	71	100	71	2	142	2
Noble .....	106	9,738	106	10,310	69	23	361	100	361	4	1,444	2
Ottawa .....	97	5,826	97	6,863	80	13	36	106	38	3	104	3
Paulding .....	90	7,621	90	8,663	94	8	18	106	38	3	104	3
Perry .....	101	13,966	101	14,106	83	16	130	84	109	3	327	3
Pickaway .....	103	61,983	103	63,642	66	16	33	100	33	3	99	3
Pike .....	110	13,630	110	14,993	83	23	11	100	12	3	24	3
Portage .....	102	18,657	102	18,923	86	3	11	108	608	3	1,824	3
Preble .....	102	37,036	102	37,773	76	7	16	108	608	3	1,824	3
Putnam .....	101	22,336	101	23,164	84	13	4	100	4	3	12	3
Richland .....	101	30,613	101	30,823	91	2	621	104	646	4	2,684	3
Ross .....	102	41,662	102	42,496	79	23	87	133	66	3	166	3
Sandusky .....	83	23,871	83	27,780	81	8	126	130	164	3	492	3
Senoto .....	107	12,987	107	13,886	94	6	144	107	164	4	616	3
Seneca .....	94	46,404	94	43,676	89	13	114	103	117	3	361	3
Shelby .....	85	28,447	85	24,480	79	13	4	100	4	2	8	2
Stark .....	104	42,646	104	44,352	92	2	4	100	4	2	8	2
Summit .....	101	19,960	101	20,169	87	5	14	103	14	4	56	3
Trembul .....	106	8,463	106	9,354	84	4	12	100	12	3	36	3
Truscarawas .....	89	21,763	89	21,946	95	4	371	111	412	3	1,236	3
Union .....	103	9,886	103	10,133	83	14	69	100	69	3	207	3
Van Wert .....	113	11,909	113	13,467	90	6	2	100	69	3	207	3
Vinton .....	109	4,314	109	6,247	86	20	483	103	497	2	994	3
Warren .....	88	23,744	88	23,269	63	18	113	110	124	4	496	4
Washington .....	102	15,041	102	16,342	82	16	6	100	76	3	10	3
Wayne .....	103	47,091	103	49,122	83	6	72	106	361	2	162	2
Williams .....	104	16,788	104	17,460	92	6	363	94	40	4	702	2
Wood .....	86	16,107	86	16,107	95	7	40	100	40	4	160	2
Wyandot .....	104	23,345	104	24,279	97	11	16,236	96	16,518	3	48,927	3
Average per cent.....	101	1,711,047	101	1,721,080	83	27	16,236	96	16,518	3	48,927	3
Totals .....	101	1,711,047	101	1,721,080	83	27	16,236	96	16,518	3	48,927	3

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE AREA OF WHEAT AND RYE, AREA AND PRODUCTION OF ALFALFA AND POTATOES AND THE CONDITION OF OTHER CROPS, NOVEMBER 1, 1939—Concluded.

Counties.	Rye.				Corn.	Buck-wheat.	Clover Seed.	Potatoes.			Hogs.		Com. Fert.
	Area sown last fall as reported by township assessors.	Sown this fall compared with last year.	Estimated area seeded for the harvest of 1910.	Condition compared with an average.				Area planted as returned by township assessors.	Average production per acre.	Bushels.	Per cent.	Condition compared with an average.	
	Acres.	Per cent.	Acres.	Per cent.	Per cent.	Per cent.	Per cent.	Acres.	Bushels.	Bushels.	Per cent.	Number to be fattened with 1938.	Per cent.
Adams .....	738	100	738	100	83	.....	.....	56	133	24,048	2	.....	92
Allen .....	2,782	72	2,003	83	87	.....	74	72	72	57,024	.....	.....	70
Ashtabula .....	889	85	833	94	96	100	73	936	109	108,782	.....	.....	88
Athens .....	39	96	384	99	98	90	44	4,293	87	373,491	.....	.....	94
Auglaize .....	599	104	623	.....	90	.....	.....	4,793	88	42,064	.....	.....	75
Belmont .....	163	95	155	78	98	.....	29	1,051	82	86,183	.....	.....	83
Brown .....	4,382	102	4,470	93	96	.....	24	1,046	96	96,576	.....	.....	78
Butler .....	235	83	187	79	97	.....	100	1,293	79	37,000	.....	.....	14
Carroll .....	85	87	74	93	99	.....	24	1,842	109	102,147	.....	.....	75
Champaign .....	1,072	93	987	92	99	.....	23	1,292	82	69,044	.....	.....	76
Clark .....	1,046	94	983	96	97	.....	30	386	106	45,055	.....	.....	84
Clermont .....	2,197	90	1,977	90	98	.....	.....	1,141	106	120,946	.....	.....	43
Clinton .....	3,148	115	2,610	79	98	.....	.....	1,793	106	79,300	.....	.....	86
Columbiana .....	36	87	205	84	98	.....	.....	233	84	24,688	.....	.....	83
Coshocton .....	231	90	249	85	97	.....	.....	281	86	226,292	.....	.....	87
Crawford .....	138	88	119	98	87	.....	.....	1,818	84	113,176	.....	.....	66
Cuyahoga .....	575	99	581	98	96	.....	26	1,837	76	124,412	.....	.....	81
Darke .....	90	90	86	82	94	.....	63	1,916	86	134,412	.....	.....	80
Defiance .....	279	90	279	90	97	.....	62	1,851	119	708,169	.....	.....	90
Delaware .....	1,638	99	1,622	100	97	.....	123	1,213	104	126,152	.....	.....	77
Erle .....	381	97	370	70	97	.....	.....	776	55	42,680	.....	.....	85
Fairfield .....	838	82	687	94	97	.....	.....	1,051	135	141,885	.....	.....	67
Fayette .....	295	93	274	91	92	.....	.....	5,739	111	413,919	.....	.....	89
Franklin .....	1,400	76	1,060	65	83	.....	.....	738	120	63,448	.....	.....	85
Fulton .....	862	70	603	50	84	.....	.....	1,822	93	169,446	.....	.....	44
Gallia .....	67	88	59	83	84	.....	.....	386	101	94,536	.....	.....	74
Geauga .....	228	105	239	97	97	.....	.....	259	106	27,972	.....	.....	83
Greene .....	1,103	115	1,288	94	101	.....	.....	3,877	97	327,563	.....	.....	84
Guernsey .....	310	103	313	82	104	.....	.....	3,877	88	91,434	.....	.....	79
Hamilton .....	12	101	12	100	104	.....	.....	548	97	53,156	.....	.....	89
Hancock .....	823	96	790	88	94	.....	.....	3,717	106	390,295	.....	.....	81
Hardin .....	1,292	102	1,224	93	96	.....	.....	890	101	56,320	.....	.....	86
Harrison .....	36	67	36	88	82	.....	.....	1,428	104	144,228	.....	.....	82
Henry .....	524	72	377	85	96	.....	.....	43	112	67,518	.....	.....	68
Highland .....	2,032	86	1,748	90	96	.....	.....	728	86	8,648	.....	.....	73
Hocking .....	271	75	270	75	90	.....	.....	591	95	56,065	.....	.....	54
Holmes .....	327	80	270	100	96	.....	.....	913	92	83,896	.....	.....	74

Huron .....	265	77	90	204	97	96	79	76	1,643	97	159,371	1	98	81	86
Jackson .....	40	90	36	71	75	88	77	16	241	123	30,848	2	97	82	90
Jefferson .....	73	86	71	581	74	89	93	40	884	89	78,676	2	96	76	81
Knox .....	825	70	578	9	82	83	100	25	1,214	85	106,040	2	93	82	84
Lake .....	13	63	94	9	87	90	97	88	2,171	140	136,773	3	92	83	16
Lawrence .....	2,968	83	94	2,818	87	90	91	88	532	85	74,480	3	95	67	37
Licking .....	1,714	89	94	1,525	86	90	91	45	1,564	86	132,940	3	92	70	69
Loran .....	210	97	94	696	97	96	91	30	574	92	51,808	1	91	76	28
Lucas .....	782	83	94	381	96	94	94	64	3,120	109	360,080	1	93	83	78
Madison .....	381	100	94	381	98	96	96	58	3,227	112	361,424	1	96	81	60
Mahoning .....	410	73	94	163	98	96	94	34	3,505	150	14,700	1	94	80	35
Marion .....	689	77	94	538	91	91	91	70	4,339	96	325,945	1	97	82	97
Medina .....	105	75	94	79	91	96	96	63	72,974	91	394,849	1	93	79	86
Mercer .....	404	100	94	404	97	96	96	75	682	107	35,784	1	97	87	87
Miami .....	232	90	94	209	97	96	96	31	639	56	114,190	1	100	79	11
Montgomery .....	442	88	94	389	97	96	96	46	1,202	96	135,643	1	92	72	48
Morgan .....	71	100	94	272	97	96	96	83	1,343	101	72,000	1	94	81	71
Morrow .....	687	94	94	646	96	97	96	56	445	90	33,375	2	94	71	75
Muskingum .....	364	96	94	349	97	96	96	83	1,534	55	99,710	1	96	83	88
Noble .....	104	100	94	104	98	96	96	45	1,020	100	102,000	2	95	83	85
Ottawa .....	347	100	94	347	93	96	96	43	645	100	54,500	2	91	46	74
Paulding .....	843	80	94	674	83	88	96	75	707	80	56,660	2	98	87	8
Perry .....	210	92	94	193	100	96	97	27	1,514	167	56,780	2	88	73	98
Pickaway .....	313	96	94	300	77	94	96	43	279	90	144,260	3	95	74	8
Pike .....	14	79	94	117	83	104	111	83	568	107	29,853	3	97	72	88
Portage .....	270	100	94	270	82	90	96	100	8,012	121	68,728	3	96	77	84
Preble .....	138	90	94	138	80	90	96	29	259	90	721,080	1	98	93	89
Putnam .....	1,073	100	94	1,073	93	73	76	66	1,181	111	23,749	2	94	81	84
Richland .....	544	89	94	484	74	91	91	44	2,506	120	207,998	2	94	77	80
Ross .....	1,063	76	94	762	73	90	96	51	894	130	33,280	3	96	77	34
Rundusky .....	546	71	94	366	73	90	96	55	2,498	111	277,278	3	96	72	82
Schen .....	187	98	94	183	88	96	96	51	1,250	128	181,280	5	96	76	83
Seneca .....	34	107	94	34	100	94	94	23	2,152	107	126,939	2	91	78	94
Shelby .....	258	80	94	206	98	96	96	32	6,239	80	419,120	5	96	74	52
Summit .....	312	83	94	261	78	94	94	5	3,935	93	366,955	2	96	88	77
Tribune .....	434	93	94	464	73	94	96	82	3,569	77	276,243	1	96	86	92
Tuscarawas .....	235	90	94	212	96	96	96	48	1,646	101	166,246	1	97	82	50
Union .....	2,100	73	94	1,533	82	94	96	80	1,669	160	25,350	2	100	78	49
Vinton .....	1,492	90	94	1,343	120	96	96	42	964	87	83,868	2	96	74	90
Warren .....	1,712	108	94	1,712	88	97	96	18	433	106	45,465	2	94	81	90
Washington .....	185	80	94	148	90	96	96	47	2,070	78	25,740	3	94	81	86
Wayne .....	136	86	94	136	96	96	96	58	6,889	103	206,824	1	96	79	84
Williams .....	296	96	94	231	82	96	96	78	6,501	81	533,069	1	97	82	19
Wood .....	246	73	94	246	80	96	96	33	966	105	62,665	4	96	76	16
Wyandot .....	530	97	94	194	96	96	96	60	593	69	74,563	1	99	86	60
Average per ct.	53,376	91	94	53,269	87	90	87	46	132,013	94	12,371,015	2	94	76	65
Totals .....	53,376	91	94	53,269	87	90	87	46	132,013	94	12,371,015	2	94	76	65

**December 1, 1909**

WHEAT—Condition compared with an average.....	93 per cent.
“ —Amount of crop of 1909 sold as soon as threshed.....	43 per cent.
CORN—Area planted in 1909 as returned by township assessors..	3,050,825 acres
“ —Average yield per acre.....	39 bushels
“ —Total estimated product for 1909.....	121,127,532 bushels
“ —Put into silo.....	4 per cent.
“ —Average date cribbing began.....	October 18
CLOVER—Area sown in 1908 cut for seed.....	17 per cent.
“ —Average yield per acre.....	1.4 bushels
APPLES—Probable total yield compared with an average.....	43 per cent.
TOBACCO—Probable average product per acre.....	839 pounds
CATTLE—Number being fed for spring market compared with last year.....	69 per cent.
SHEEP—Number being fed for mutton compared with last year....	74 per cent.

The early predictions of a bountiful corn harvest are now fully verified. The estimated corn area, as returned by the township assessors, was 3,050,825 acres, and from this has been produced 121,127,532 bushels, an average production per acre of 39 bushels. Compared with the esti-

mated harvest of 1908 this is an increase of 17,497,786 bushels, the heaviest production since 1906. Correspondents report the quality of the grain as most satisfactory. It is estimated that 4 per cent. of the crop was put into silo. The average date of cribbing was October 18.

The yield of apples, as compared with an average, is estimated at 43 per cent.

Tobacco production per acre is estimated at 839 pounds.

Compared with last year the number of cattle being fed for spring markets is estimated at 69 per cent.

OFFICIAL REPORT OF THE OHIO DEPARTMENT OF AGRICULTURE ON THE ACREAGE AND PRODUCTION OF CORN AND THE CON-  
DITION OF OTHER CROPS DECEMBER 1, 1909.

Counties.	Wheat.				Corn.				Clover.		Apples.	Tobacco.	Cattle.	Sheep.
	Condition com- pared with an average.	Amount of crop sown as threshed.	Damage to growing crop by Hessian fly.	Damage to growing crop by white grub.	Area planted in 1909 as re- turned by township as- sessors.	Average yield per acre.	Total esti- mated prod- uct for 1909.	Put into silo.	Date cribbing began Oct. 1.	Area sown in 1908 cut for seed.	Average yield per acre.			
	Per cent.	Per cent.	Per cent.	Per cent.	Acres.	Bushels.	Bushels.	Per cent.	Days.	Per cent.	Bushels.	Pounds.	Per cent.	Per cent.
Adams .....	102	40			55,887	30	1,016,010	.....	35	11	1.08	900	.....	70
Allen .....	96	52	3		41,066	30	1,232,550	2	21	22	1.32	43	43	77
Ashtabula .....	102	32		2	23,103	33	877,914	.....	20	20	1.00	43	77	83
Athens .....	97	19	1	1	15,372	31	476,532	35	28	13	2.25	22	62	52
Auglaize .....	96	55	1	1	11,681	32	373,732	1	15	10	1.75	90	71	62
Belmont .....	83	17	1		60,334	37	1,864,208	.....	22	12	1.31	72	99	50
Brown .....	93	44	2	1	19,410	48	1,931,680	5	16	5	1.00	43	88	96
Butler .....	100	20			45,711	30	1,371,330	7	25	24	1.80	57	82	65
Carroll .....	91	29	2		65,440	35	2,290,400	.....	18	8	1.25	10	80	85
Champaign .....	92	74	2	1	12,253	53	454,471	2	16	35	1.12	77	71	81
Clark .....	85	80			61,577	43	3,283,851	2	25	2	1.00	43	60	50
Clermont .....	105	71	1	1	62,745	33	2,373,535	2	23	2	1.00	88	73	77
Columbiana .....	86	19	1	1	38,180	34	1,259,940	7	24	19	1.25	49	75	85
Coshocton .....	88	34	1	1	68,420	44	3,010,480	1	17	4	1.50	18	49	87
Crawford .....	104	37	1	1	25,960	34	572,288	.....	19	11	1.00	31	86	86
Cuyahoga .....	93	72	1	1	37,151	41	882,640	2	24	24	1.00	43	84	85
Delaware .....	74	43	1		6,646	38	1,523,191	19	19	10	1.09	61	82	87
Deiaware .....	87	40	1		69,400	42	2,915,800	.....	22	18	1.33	75	83	87
Erle .....	104	55	1	1	35,515	34	1,207,510	3	18	29	1.07	48	77	63
Fairfield .....	93	45	1	1	39,203	44	1,450,474	.....	17	17	1.05	43	77	77
Fayette .....	86	57	1		2,157,857	51	2,157,857	2	27	20	1.06	49	78	84
Franklin .....	87	64	1	1	2,133,532	37	2,133,532	6	17	19	1.06	23	64	49
Fulton .....	99	34	1	1	56,299	51	2,083,053	1	21	19	1.25	46	50	84
Gallia .....	93	51			36,007	50	1,800,350	3	14	13	2.00	54	68	91
Geauga .....	100	32	1	1	21,174	27	571,698	1	15	12	2.00	48	29	39
Greene .....	86	63	1	1	9,386	37	347,282	29	25	2	1.00	29	30	80
Guernsey .....	83	22			68,087	46	3,040,002	3	20	5	1.06	26	74	81
Hamilton .....	94	40	1		15,952	41	654,442	1	17	12	1.33	48	90	97
Hancock .....	101	33	1		781,700	50	1,877,538	.....	21	2	1.25	51	73	85
Hardin .....	111	54			53,551	38	1,827,538	3	22	24	1.19	43	79	94
Harrison .....	88	16	2	1	34,813	40	1,892,520	1	23	43	1.31	60	80	91
Henry .....	88	48			62,441	38	871,340	1	24	3	1.25	42	40	59
Highland .....	87	34	3	2	2,809,845	45	2,809,845	8	8	15	1.33	68	51	62
					57,518	39	2,243,202	.....	24	29	1.35	675	64	74

	94	7	2	3	14,912	27	402,624	3	28	2	1.50	20	839	69	74
Hooking .....	100	27	1	3	22,158	52	1,182,216	2	28	2	1.50	37	.....	90	85
Holmes .....	98	24	1	1	12,381	33	1,263,332	6	28	33	1.58	42	.....	57	85
Huron .....	90	47	1	1	10,454	28	380,948	3	14	46	.....	20	.....	84	87
Jefferson .....	79	18	2	2	31,127	38	387,233	8	8	.....	.....	35	.....	40	75
Knox .....	91	22	1	1	13,859	37	234,168	1	15	4	1.00	36	.....	71	75
Lake .....	89	22	1	3	18,569	33	346,476	7	7	16	2.00	18	.....	70	80
Lawrence .....	92	46	1	1	13,521	25	1,947,424	1	23	5	3.00	36	500	40	43
Licking .....	99	46	1	1	53,361	38	1,974,357	4	18	33	1.27	57	.....	71	82
Logan .....	89	65	1	1	18,330	37	641,560	1	13	8	2.00	72	.....	85	81
Lorain .....	101	59	1	13	22,379	35	984,676	6	15	5	1.68	24	.....	45	63
Lucas .....	86	59	2	6	76,530	44	2,665,670	1	18	25	1.37	32	.....	102	93
Madison .....	94	85	2	.....	47,117	39	484,470	23	32	9	1.05	43	.....	89	83
Manoning .....	88	42	3	1	13,842	35	1,978,914	3	18	29	1.33	32	.....	77	87
Marion .....	89	26	1	1	21,085	42	694,155	3	20	.....	.....	22	.....	59	89
Medina .....	96	44	.....	.....	13,967	27	377,149	3	11	11	1.38	41	.....	59	84
Melms .....	78	44	.....	.....	62,599	47	2,472,153	.....	22	15	1.21	72	.....	73	84
Mercer .....	96	51	1	1	53,917	50	2,445,350	.....	15	37	1.00	91	.....	94	108
Miami .....	97	54	1	2	68,917	40	686,200	.....	17	15	2.25	55	942	74	68
Monroe .....	90	17	4	.....	50,011	35	1,750,336	2	11	9	1.00	68	1,100	70	78
Montgomery .....	94	59	1	.....	17,555	33	486,486	9	19	28	1.50	42	750	70	78
Morgan .....	102	43	1	.....	26,705	37	988,065	1	16	33	1.19	23	.....	86	84
Morrow .....	88	20	2	2	17,063	36	974,283	3	17	9	2.75	65	.....	61	84
Muskingum .....	90	42	4	.....	25,783	32	505,376	.....	19	27	1.17	70	1,200	70	90
Noble .....	95	72	.....	.....	16,734	35	764,565	.....	15	28	1.23	43	.....	84	84
Ottawa .....	102	53	1	.....	69,274	41	2,430,234	1	12	28	1.06	42	.....	87	84
Perry .....	96	36	1	.....	17,520	33	2,816,256	2	16	12	1.26	44	.....	72	86
Pickaway .....	86	63	1	1	74,112	33	688,060	1	24	23	1.06	41	.....	81	84
Pike .....	88	40	.....	.....	29,266	38	1,112,108	.....	15	10	1.26	42	1,000	84	86
Portage .....	86	30	.....	.....	14,748	33	486,684	19	26	10	1.00	15	.....	63	76
Preble .....	102	74	.....	.....	62,215	44	3,737,460	.....	20	5	1.00	73	750	92	74
Putnam .....	92	68	.....	.....	64,489	43	2,773,457	.....	22	27	1.76	20	.....	72	47
Richland .....	100	31	2	2	31,465	40	1,268,600	2	16	31	1.00	23	.....	68	76
Ross .....	87	56	1	1	61,030	44	2,686,320	.....	22	13	1.04	47	.....	63	72
Sandusky .....	90	38	.....	.....	40,880	36	1,470,960	1	15	6	1.26	63	.....	70	65
Seneca .....	99	31	1	.....	52,548	37	824,906	1	11	11	1.66	83	925	83	83
Scioto .....	92	33	.....	.....	54,252	56	3,038,110	1	18	14	1.00	81	.....	84	67
Shelby .....	93	24	1	2	31,155	42	1,308,510	11	10	6	1.50	57	800	30	71
Stark .....	92	38	5	2	16,315	36	587,376	11	21	10	1.50	77	.....	70	46
Summit .....	83	36	1	.....	14,510	35	597,850	26	10	3	1.21	16	.....	35	80
Trumbull .....	97	31	1	1	19,204	38	729,752	3	19	15	1.25	30	.....	82	80
Tuscarawas .....	84	53	.....	.....	57,165	37	1,821,140	10	17	16	1.42	28	.....	73	70
Union West .....	98	58	1	.....	53,800	38	1,172,270	.....	23	38	.....	23	.....	23	38
Vinton .....	87	23	.....	.....	53,800	29	331,908	.....	18	10	1.00	20	1,000	80	95
Warren .....	94	63	.....	.....	19,650	40	609,150	4	14	16	1.17	106	.....	85	68
Washington .....	83	34	.....	.....	36,232	37	1,303,154	.....	17	15	1.00	42	.....	65	68
Wayne .....	99	17	1	.....	93,432	36	3,065,154	3	20	37	1.23	71	.....	68	89
Williams .....	84	30	.....	.....	93,432	37	3,384,633	.....	17	52	1.40	34	.....	80	67
Wood .....	89	58	3	.....	36,330	36	1,331,680	4	9	30	1.37	27	.....	82	57
Wyandot .....	101	91	1	.....	.....	38	121,127,532	.....	17	.....	.....	.....	.....	.....	.....
	93	43	0.87	0.55	3,050,835	39	121,127,532	4	Oct. 18	17	1.4	43	839	69	74

TABLE SHOWING THE ANNUAL PRODUCTION AND PRICE OF WHEAT AND CORN FOR THE YEARS 1850 TO 1909, INCLUSIVE.

Year.	Bushels of wheat.	Average number of bushels per acre.	Price per bushel.		Bushels of corn.	Average number of bushels per acre.	Price per bushel.		Average.
			Range.	Average.			Range.	Average.	
1850.....	31,500,000	18	\$0 70 to \$1 10	\$0 89	56,619,608	36.8	\$0 24 to \$0 51	\$0 38	
1851.....	25,309,225	15.2	58 to 78	69	61,271,382	36.7	30 to 94	38	
1852.....	23,043,737	14.1	59 to 63	60	58,165,517	33.6	25 to 45	39	
1853.....	17,118,311	12	60 to 85	73	73,436,070	40	37 to 55	42	
1854.....	11,989,110	8	85 to 170	119	52,171,551	26	40 to 55	40	
1855.....	19,569,320	13.81	110 to 200	154	87,587,434	39.7	45 to 80	67	
1856.....	15,333,837	10.2	90 to 170	127	57,802,515	27.7	32 to 63	42	
1857.....	25,397,614	14	100 to 160	118	82,555,186	36.6	48 to 80	59	
1858.....	17,655,483	10.4	67 to 100	77	50,863,582	27.7	25 to 61	41	
1859.....	13,317,967	7.2	90 to 170	115	68,760,846	26.5	50 to 90	72	
1860.....	23,640,356	13.8	65 to 138	104	91,588,704	38.2	39 to 80	50	
1861.....	20,055,424	11	93 to 112	83	74,858,878	33.5	28 to 50	34	
1862.....	20,764,887	12	72 to 100	86	62,704,887	30	27 to 40	31	
1863.....	20,452,410	11.36	82 to 130	104	54,614,617	27	35 to 70	53	
1864.....	15,541,885	9.33	95 to 212	141	54,053,491	27	63 to 127	103	
1865.....	13,234,139	9	125 to 207	178	68,053,668	35	56 to 129	77	
1866.....	6,821,747	4.5	175 to 350	227	80,398,320	36.5	45 to 65	54	
1867.....	13,350,721	11.51	195 to 280	231	63,875,064	29.8	59 to 98	79	
1868.....	16,480,039	11.31	195 to 265	227	76,725,288	34.4	82 to 108	92	
1869.....	26,499,729	15.37	115 to 198	157	62,443,346	28.4	57 to 110	73	
1870.....	18,726,341	11.29	108 to 133	115	88,565,299	37.5	69 to 105	83	
1871.....	22,274,378	13.27	110 to 155	127	98,363,080	36.7	50 to 79	56	
1872.....	18,987,664	11.22	130 to 208	158	103,038,234	40.9	44 to 57	49	
1873.....	21,974,368	12.61	130 to 180	138	84,049,323	35.1	39 to 50	42	
1874.....	26,806,815	14.51	103 to 175	116	101,815,494	39.9	52 to 115	72	
1875.....	17,867,967	9.12	103 to 155	111	112,552,942	34.8	58 to 75	65	
1876.....	27,354,568	15.18	100 to 215	141	107,892,965	32.5	40 to 55	48	
1877.....	27,916,563	16.53	108 to 212	141	111,836,107	37.8	48 to 70	42	
1878.....	41,359,120	17.58	85 to 135	116	94,008,800	31.7	31 to 45	37	
1879.....	48,540,307	17.20	88 to 132	116	105,414,504	38.9	42 to 51	42	
1880.....	39,102,623	13.5	93 to 139	110	78,712,766	31	40 to 87	49	
1881.....	42,112,103	15.59	95 to 150	132	90,869,137	34	56 to 87	72	
1882.....	37,169,738	10.67	95 to 117	105	64,001,618	24.2	44 to 76	54	
1883.....	36,396,119	14.4	80 to 110	101	87,797,813	33.3	40 to 62	53	
1884.....	24,183,430	9.8	72 to 109	89	112,192,744	39	37 to 59	47	
1885.....	37,660,681	14	74 to 100	88	88,418,556	33.5	32 to 48	39	
1886.....	27,660,681	10.4	71 to 86	80	83,118,838	30.5	34 to 55	40	
1887.....	28,400,000	11.7	71 to 89	85	111,155,506	38.9	44 to 61	52	
1888.....	26,160,994	10.4	73 to 102	83	87,838,192	32.3	30 to 49	36	
1889.....	31,663,448	14.6	75 to 115	93	63,094,215	24.5	27 to 56	37	
1890.....	31,609,676	13.8	73 to 101	89	86,500,000	33	30 to 77	40	
1891.....	45,063,480	17.5	82 to 116	99	81,962,100	30.8	49 to 67	48	
1892.....	38,381,588	14.4	73 to 101	90	81,962,100	30.8	39 to 67	48	
1893.....	43,121,569	17.2	52 to 93	64	77,229,446	25	37 to 45	42	



1894.....	45,587,534	20 9	48 to	56	51	88,805,607	25	35 to	59	45
1895.....	46,749,547	1 9	52 to	90	66	102,447,445	33 9	24 to	58	41
1896.....	48,519,789	18 53	53 to	97	72	134,796,374	31	18 to	33	27
1897.....	50,715,686	16 15	72 to	1 00	88	103,004,970	34 34	22 to	34	28
1898.....	41,044,971	15 56	64 to	1 45	87	114,214,148	37 35	27 to	41	34
1899.....	41,466,703	14 02	68 to	1 77	82	115,138,669	36 74	26 to	40	36
1900.....	10,898,155	6	70 to	89	75	143,161,675	38	323 to	47	40
1901.....	31,150,373	14 57	64 to	90	77	92,368,811	25 74	39 to	74	52
1902.....	36,901,212	18 1	63 to	84	74	122,675,349	37 3	40 to	62	56
1903.....	29,074,367	14 4	70 to	83	78	92,820,349	20 1	41 to	53	45
1904.....	21,090,222	12 2	90 to	1 15	1 02	100,529,653	32 8	42 to	50	45
1905.....	32,462,786	17 3	75 to	1 14	80	108,538,992	37 8	39 to	54	46
1906.....	39,279,680	19 4	63 to	95	80	127,044,784	42 2	39 to	55	46
1907.....	30,918,367	15 4	.....	.....	.....	100,620,205	34 7	.....	.....	.....
1908.....	28,955,496	15 89	.....	.....	.....	102,622,908	36 12	.....	.....	.....
1909 (estimated).....	27,355,142	16	.....	.....	.....	121,127,532	39	.....	.....	.....

TABLE SHOWING THE AVERAGE PRODUCTION AND PRICE OF WHEAT AND CORN BY DECADES.

Decades.	Average bushels of wheat.	Average bushels per acre.	Range of price per bushel.	Average price per bushel.	Average bushels of corn.	Average bushels per acre.	Range of price per bushel.	Average price per bushel.
1850 to 1860.....	20,023,460	12.29	\$0 58 to \$2 00	\$1 00	64,920,369	33.4	\$0 24 to \$0 90	\$0 48
860 to 1870.....	17,584,085	10 91	60 to 3 50	1 61	68,930,426	32	27 to 1 29	64
1870 to 1880 .....	24,656,959	13.29	85 to 2 15	1 27	99,986,129	36.5	38 to 1 05	54
1880 to 1890.....	34,038,945	13.21	71 to 1 50	1 00	90,991,979	33.5	30 to 87	45
1990 to 1900.....	38,042,989	15.19	48 to 1 45	77	89,648,770	32	18 to 77	39

**AVERAGE PRICES OF OTHER FARM PRODUCTS THAN WHEAT AND CORN IN THE  
LOCAL MARKETS OF OHIO FROM 1855 TO 1907 INCLUSIVE.**

	Barley.	Oats.	Rye.	Hay.	Potatoes.
	Per Bush.	Per Bush.	Per Bush.	Per Ton.	Per Bush.
1855	\$1 35	\$0 29½	\$0 70	\$14 71	.....
1856	1 58	46	91	21 00	.....
1857	58	36	58	13 46	.....
1858	67	57	82	15 38	.....
1859	76	43	86	17 73	.....
1860	69	27	56	12 62	.....
1861	60	30	48	11 85	.....
1862	1 36	58	76	16 34	.....
1863	1 51	78½	1 35	27 16	.....
1864	1 28	52	1 15	26 00	.....
1865	1 41	42	80	12 63	.....
1866	1 53	57	1 28	19 76	.....
1867	2 11	69	1 62	14 80	.....
1868	2 37	64	1 28	16 42	.....
1869	1 26	54	92	17 44	.....
1870	1 00	46	91	18 45	.....
1871	78	37	85	20 79	.....
1872	87	36	76	22 18	.....
1873	1 51	48	93	17 16	.....
1874	1 41	59	1 06	20 98	.....
1875	1 20	38	74	17 66	.....
1876	90	37	74	11 67	.....
1877	52	29	59	9 86	.....
1878	1 00	27	54	10 79	.....
1879	69	34	82	15 87	.....
1880	98	38	1 04	16 36	.....
1881	1 05	50	94	17 90	\$1 07
1882	76	39	62	12 39	67
1883	76	34	62	11 63	46
1884	80	32	63	12 81	50
1885	86	30	63	12 16	48
1886	61	29	58	11 17	53
1887	81	33	62	14 70	88
1888	78	26	52	12 74	40
1889	57	27	50	10 56	52
1890	77	48	81	10 58	97
1891	70	33	85	11 25	45
1892	69	33	73	11 10	55
1893	64	32	55	12 55	74
1894	60	35	52	10 95	66
1895	56½	27	53	12 70	49
1896	36	20	36	12 83	28
1897	39	22	39	11 00	48
1898	47	27	51	8 65	57
1899	52	27	62	10 10	49
1899	51	25	59	13 95	43
1900	62	34	60	11 00	60
1901	57	37	54	10 50	65
1902	58	38	59	12 00	75
1903	59	37	60	11 50	80
1904	48	30	50	10 75	55
1905	56	32	56	12 00	44
1906	.....	.....	.....	.....	.....
1907	.....	.....	.....	.....	.....
1908	.....	.....	.....	.....	.....

## TABULAR STATEMENT.

Exhibiting the number of Horses, Cattle, Mules, etc., Sheep and Hogs returned to the Auditor of State's Office by the several County Auditors, for the years 1908 and 1909, as required by Section 1049, Revised Statutes, and to provide for the publication of the same, as provided by Section 173, Revised Statutes.

COUNTIES.	Number of Horses.		Number of Cattle.		Number of Mules.		Number of Sheep.		Number of Hogs.	
	1908.	1909.	1908.	1909.	1908.	1909.	1908.	1909.	1908.	1909.
Adams.....	5,368	5,281	9,366	8,962	290	349	8,284	8,074	10,366	7,066
Allen.....	9,603	10,111	15,208	15,435	188	165	22,355	23,801	30,782	24,061
Ashtabula.....	7,577	7,536	13,060	13,198	100	113	39,607	40,899	17,072	13,823
Athens.....	10,282	10,101	26,110	27,170	71	128	8,548	8,459	5,200	3,353
Buglaize.....	4,704	4,735	9,019	9,310	118	128	46,214	47,803	27,985	24,977
Buglaize.....	9,076	8,841	16,135	15,912	182	254	8,686	8,444	30,635	24,235
Belmont.....	8,563	8,563	16,123	16,236	326	353	78,390	82,231	17,521	15,521
Brown.....	17,342	11,024	15,733	11,866	320	416	8,340	8,195	25,292	22,869
Butler.....	11,347	4,533	15,733	14,594	612	614	5,347	6,171	28,555	22,808
Carroll.....	4,261	4,116	16,224	16,248	475	103	57,478	62,172	35,205	28,308
Champaign.....	11,402	11,834	17,106	17,431	474	501	22,418	24,607	35,397	29,546
Clark.....	11,440	7,037	11,195	11,354	544	610	22,535	24,985	29,545	26,778
Clermont.....	7,017	10,013	13,526	12,356	544	583	3,984	3,114	14,543	9,768
Columbus.....	9,805	10,019	19,096	19,352	663	698	17,826	18,435	51,608	42,370
Coshocton.....	9,849	8,703	15,727	14,701	234	274	26,763	29,635	11,048	8,531
Crawford.....	6,587	8,723	15,200	19,173	189	176	93,685	98,618	12,392	9,250
Cuyahoga.....	8,683	16,819	12,532	12,118	160	245	49,622	50,653	26,244	23,568
Darke.....	17,428	18,757	22,901	23,462	101	84	4,747	4,387	1,943	1,438
Defiance.....	7,095	7,235	10,406	10,813	402	413	5,501	6,135	44,474	36,157
Delaware.....	8,676	8,656	17,640	18,065	66	83	16,564	16,379	16,624	9,538
Eric.....	5,843	5,782	6,991	7,176	174	182	48,901	52,013	21,041	17,554
Fairfield.....	10,476	10,926	19,947	19,991	18	22	12,266	12,762	6,962	5,462
Payette.....	10,323	10,692	23,637	15,164	189	233	18,517	18,526	35,587	28,283
Franklin.....	14,100	14,174	18,943	18,345	365	519	11,900	14,423	48,277	45,344
Fulton.....	7,480	7,773	17,183	18,526	303	310	8,718	11,118	21,764	18,778
Gallia.....	4,543	4,584	9,781	9,905	34	40	16,088	14,066	23,186	13,334
Geauga.....	5,623	5,579	18,741	19,034	205	274	15,701	18,302	5,131	3,574
Greene.....	10,067	10,657	14,935	14,906	45	41	5,288	5,772	3,683	2,969
Guernsey.....	5,513	5,535	12,719	11,953	577	573	17,767	20,502	32,347	30,943
Hamilton.....	15,923	15,455	15,454	14,369	401	398	75,969	81,709	5,406	3,683
Hancock.....	9,920	10,452	20,159	20,724	1,390	1,243	2,575	2,542	9,803	6,625
Hardin.....	9,449	9,568	18,071	17,765	107	129	39,020	38,842	39,621	32,228
Harrison.....	4,773	4,750	10,261	10,232	140	187	48,448	51,644	34,999	27,529
Henry.....	7,692	8,185	12,029	12,204	128	109	113,451	122,426	5,083	11,939
Highland.....	8,796	8,566	17,323	16,455	99	118	8,636	8,208	18,996	11,669
Hocking.....	3,653	3,769	9,830	8,970	602	596	21,620	22,858	40,313	32,631
Holmes.....	7,173	6,989	15,980	15,255	92	99	15,829	16,518	5,661	4,374
Huron.....	8,500	8,007	11,944	11,396	101	81	31,405	26,017	18,419	14,151
Jackson.....	3,385	3,438	9,625	10,094	89	116	56,488	64,576	13,443	9,552
					453	418	4,330	4,062	3,598	2,459

Jefferson .....	5,997	5,767	11,290	11,343	140	97	47,609	51,067	5,904	4,578
Knox .....	8,328	8,321	20,193	20,181	171	169	120,377	120,371	17,882	17,884
Lake .....	4,640	4,498	6,979	7,647	98	95	3,657	3,753	1,711	1,295
Lawrence .....	3,656	3,356	7,647	7,647	400	391	1,815	1,701	4,228	2,797
Licking .....	12,827	13,306	27,105	25,571	203	229	106,371	116,034	27,322	20,800
Logan .....	10,384	10,908	15,451	16,126	299	293	37,551	49,514	32,558	24,419
Loran .....	19,336	10,640	19,400	19,632	50	42	27,245	17,188	5,738	17,330
Lucas .....	8,543	8,543	9,292	9,634	54	54	21,165	2,077	8,602	6,510
Madison .....	10,440	10,484	18,531	18,834	322	316	21,232	21,670	43,919	35,690
Manhoning .....	10,271	8,929	17,196	16,392	249	254	18,327	18,895	8,062	6,659
Marion .....	7,806	7,958	13,184	13,418	190	269	55,694	50,905	30,132	26,781
Medina .....	8,411	8,771	15,068	15,473	88	76	21,465	21,446	9,543	7,233
Mega .....	4,176	4,175	8,750	12,967	232	221	28,583	30,408	2,836	1,760
Mercer .....	10,573	10,810	18,622	16,577	165	173	13,248	13,496	31,555	26,185
Miami .....	11,768	12,118	13,655	13,826	531	556	2,648	2,904	19,236	16,465
Montgomery .....	4,399	4,392	11,358	12,108	43	63	12,678	15,147	4,949	3,657
Morgan .....	15,863	16,543	16,520	16,520	445	587	2,894	3,007	23,456	20,979
Morrow .....	4,619	4,590	17,437	10,946	43	47	70,951	82,889	4,198	2,734
Muskingum .....	7,939	8,126	11,927	12,838	112	129	70,890	75,936	13,386	11,060
Noble .....	8,938	8,703	21,452	20,257	301	310	94,642	106,342	10,469	7,469
Odessa .....	4,542	4,657	13,804	13,553	70	77	58,867	66,896	5,431	3,367
Paulding .....	5,349	5,566	7,599	7,997	36	36	6,012	6,683	6,455	5,083
Perry .....	6,597	7,497	5,879	6,398	112	159	9,808	11,059	11,279	8,416
Pickaway .....	10,671	11,121	20,971	19,287	335	389	33,382	34,981	10,043	7,523
Pike .....	3,999	3,936	13,512	12,811	81	84	6,985	9,422	38,730	31,285
Portage .....	8,749	9,622	19,144	19,948	291	286	4,875	4,633	8,163	5,634
Preble .....	10,635	10,945	15,630	15,386	650	672	7,147	7,275	7,212	6,034
Putnam .....	9,136	9,566	14,571	14,881	100	97	13,142	14,039	39,979	31,317
Richland .....	9,460	9,627	16,368	16,979	247	300	44,621	46,966	32,472	25,111
Ross .....	10,285	10,815	17,440	17,644	216	240	11,563	14,754	20,230	17,197
Sandusky .....	8,909	8,853	11,769	13,311	72	79	16,902	16,817	30,481	29,211
Scioto .....	5,429	5,537	8,637	8,860	630	672	896	1,156	21,673	17,646
Seneca .....	11,264	10,357	16,344	16,058	149	168	43,483	44,785	7,121	6,747
Shelby .....	9,506	9,730	14,920	14,824	100	160	6,758	6,952	33,725	23,775
Stark .....	14,648	14,621	24,773	24,300	296	203	16,889	16,189	20,158	18,855
Summit .....	9,596	9,485	17,482	17,127	136	136	5,073	5,197	22,226	16,941
Tuscarawas .....	10,080	10,120	25,708	25,065	128	122	15,564	15,662	6,264	5,025
Union .....	8,424	8,070	19,430	17,731	173	167	33,457	33,263	11,694	8,913
Van Wert .....	8,551	9,177	14,039	14,900	155	147	36,999	40,367	34,267	29,344
Vinton .....	9,296	9,776	11,494	10,836	156	156	12,806	12,048	26,806	17,688
Warren .....	2,507	2,778	6,770	6,653	197	197	19,195	21,853	2,531	2,638
Washington .....	9,279	9,425	12,114	12,114	560	525	37,381	37,010	26,672	20,996
Wayne .....	6,949	7,013	14,501	15,058	161	164	33,362	37,643	3,728	3,728
Williams .....	12,285	12,506	22,722	23,486	391	457	20,294	20,944	24,085	20,295
Wood .....	7,353	7,114	14,460	15,063	120	129	26,221	23,944	12,384	12,384
Wyandot .....	11,145	11,701	16,941	17,681	139	141	33,157	33,795	31,795	26,770
Wyandot .....	7,929	8,747	11,943	12,558	188	148	62,212	72,694	27,739	25,012
Total .....	755,361	765,032	1,306,994	1,307,528	21,083	22,334	2,464,794	2,608,203	1,652,589	1,320,755

Horses, 9,671 increase; cattle, 534 increase; mules, 1251, increase; sheep, 143,409 increase; hogs, 331,834 decrease.

## AGRICULTURAL STATISTICS.

Counties.	Wheat.		Rye.		Buckwheat.	
	Acres sown for 1908.	Bushels produced 1908.	Acres sown for 1909.	Bushels produced 1908.	Acres sown for 1908.	Bushels produced 1908.
Adams .....	17,673	164,956	16,828	485	1	3
Allen .....	17,548	256,305	13,023	3,122	134	226
Ashtabula .....	24,970	454,808	26,092	5,073	4,463	72,046
Athens .....	5,665	86,817	4,898	10,485	58	788
Auglaize .....	5,002	63,986	6,598	16	41	580
Belmont .....	28,157	472,434	26,273	921	17	38
Brown .....	12,246	147,568	14,002	11,088	47	606
Butler .....	18,329	180,048	17,768	16,063	15	121
Carroll .....	48,806	791,173	40,937	2,324	4	60
Champaign .....	12,049	190,061	14,101	1,118	64	889
Clark .....	28,670	389,603	18,813	1,463	26	25
Clermont .....	26,955	362,417	21,408	1,908	15	14
Columbiana .....	13,892	160,184	13,072	10,486	23	278
C. shocton .....	19,231	339,798	19,417	1,661	304	6,061
Crawford .....	28,247	280,325	23,036	9,076	2	10
Cuyaboga .....	6,082	433,517	22,514	3,213	44	235
Darke .....	46,789	125,636	38,060	1,713	231	3,971
Defiance .....	13,549	836,898	15,553	1,692	6	19,397
Delaware .....	18,564	260,947	14,198	10,254	38	355
Erie .....	13,733	187,486	14,798	5,341	44	235
Fairfield .....	39,952	278,961	12,434	17,073	20	260
Fayette .....	28,193	477,468	33,064	6,325	23	278
Franklin .....	31,274	332,519	26,644	3,710	2	10
Fulton .....	15,648	337,734	28,723	286	235	235
Galla .....	10,436	260,825	12,701	8,606	39	355
Geauga .....	4,910	114,131	10,157	77	1,070	19,397
Greene .....	41,947	89,463	3,974	962	6	32
Guernsey .....	9,604	581,677	30,951	9,517	6	19,397
Hamilton .....	13,314	107,023	11,236	2,063	38	355
Hancock .....	32,407	207,062	16,119	7,469	44	235
Hardin .....	12,442	454,991	27,702	1,213	1	1
Harrison .....	27,786	137,517	8,606	11,823	62	1,117
Henry .....	21,764	120,480	8,627	12,919	97	1,235
Highland .....	36,672	427,279	20,635	13,873	7	109
Hocking .....	8,243	377,514	423	3,869	1	1
Holmes .....	22,370	96,797	9,803	2,062	1	1
		440,773	23,710	3,071		

Alton	30,864	632,245	22,787	306	8,545	285	70	1,136
Jackson	6,189	97,911	6,103	23	151	40	381	4,073
Jefferson	9,843	146,538	9,870	72	636	78	32	691
Knox	28,225	420,728	28,647	794	6,081	676	536	6,457
Lake	2,821	54,010	2,182	771	11,032	825	13	4
Lawrence	2,084	22,168	1,946	19	71	13	28	624
Licking	26,891	292,140	26,210	1,223	12,879	2,968	61	65
Logan	207,990	2,077,990	11,683	2,872	28,436	1,714	6	7,080
Lorain	17,064	366,683	13,640	369	7,010	310	390	30
Lucas	6,085	136,797	6,857	1,138	3,451	782	8	4,841
Madison	22,772	314,356	18,867	470	18,671	381	221	290
Madison	13,881	254,206	14,384	425	6,708	410	12	210
Marion	14,463	215,671	12,004	132	1,750	206	16	3
Medina	20,974	420,020	22,638	691	18,913	699	13	210
Melgs	9,910	121,169	10,586	569	567	105	16	210
Mercer	24,857	433,697	21,539	573	12,487	404	16	3
Miami	34,178	640,510	30,229	573	1,901	232	461	3,948
Montgomery	11,455	108,947	11,912	118	1,825	278	20	821
Montgomery	35,004	644,311	28,567	375	4,569	442	8	30
Morgan	8,864	98,553	9,620	42	468	71	20	62
Morrow	16,974	277,446	15,686	384	5,133	687	6	298
Muskingum	18,0574	218,206	19,3394	220	2,566	364	26	160
Noble	8,920	80,236	9,728	50	353	104	15	177
Ottawa	10,847	176,613	8,926	469	8,333	847	107	1,142
Paulding	3,472	161,740	7,621	1,850	24,640	843	15	3,294
Perry	12,723	128,001	13,968	141	1,981	210	313	11,826
Pickaway	57,464	937,128	51,963	410	3,310	348	350	812
Pike	13,777	167,060	13,630	87	4,248	270	7	255
Portage	17,141	344,066	13,567	279	3,278	644	17	443
Preble	43,753	784,004	37,036	291	4,794	1,003	92	138
Putnam	23,539	456,490	22,895	310	9,606	515	10	8,166
Richland	23,689	638,236	30,513	289	3,216	187	15	36
Ross	42,008	620,650	41,662	532	1,837	34	64	597
Sandusky	27,773	547,513	29,871	235	2,267	253	28	1,239
Scioto	11,738	163,401	12,937	131	3,632	312	51	37,153
Seneca	61,776	943,314	46,464	137	4,069	498	22	232
Shelby	28,990	603,032	28,447	429	6,346	235	35	1,050
Stark	40,412	888,385	42,646	295	18,168	2,100	12	120
Summit	19,215	421,779	19,960	211	40,598	1,492	131	1,574
Trumbull	8,012	138,477	8,853	415	7,267	7	3	15
Tuscarawas	20,450	351,440	21,763	256	6,396	1,585	108	1,313
Union	12,582	147,644	9,886	1,918	3,646	185	21	302
Van Wert	16,789	248,941	11,909	2,166	4,556	296	8	109
Vinton	4,137	22,326	4,314	2	9,867	336	53	1,245
Warren	23,007	382,832	22,744	810	3,243	200	34	69
Washington	15,823	168,627	15,041	52	7,972	156	108	1,313
Wayne	43,765	698,697	47,091	156	3,869	166	21	302
Williams	13,599	243,927	16,788	370	4,556	296	8	109
Wood	21,529	429,593	16,778	619	9,867	336	53	1,245
Wyandot	23,183	373,247	23,346	242	3,243	200	34	69
Totals	1,822,639	28,955,496	1,711,047	52,386	613,571	53,376	13,752	208,913

## AGRICULTURAL STATISTICS—Continued.

Counties.	Onta.			Winter Barley.			Spring Barley.		
	Acres sown 1908.	Busbels pro-duced 1908.	Acres (esti-mated) sown for 1909.	Acres sown 1908.	Busbels pro-duced 1908.	Acres (esti-mated) sown for 1909.	Acres sown 1908.	Busbels pro-duced 1908.	Acres sown for 1909.
Adams .....	848	4,378	991	25	440	2	539	14,972	642
Allen .....	17,998	481,220	24,430	15	250	31	13	271	33
Ashland .....	19,432	567,639	20,460	14	112	1	13	336	1
Ashtabula .....	24,106	697,206	26,638				4	250	18
Athens .....	586	8,090	1,176½	5	89	25	65	1,420	82
Auglaize .....	23,644	580,083	23,182	4	70	13	19	254	30
Belmont .....	8,779	163,319	9,213						6
Brown .....	2,791	13,464	4,601	6½	18,116	104	50	700	618
Butler .....	5,281	55,244	15,453	1	15	4			
Carroll .....	13,633	338,936	13,083	65	300	92	18	110	44
Champaign .....	21,511	472,559	31,831	45			38	880	27
Clark .....	9,038	174,653	10,596	10					
Clermont .....	4,715	26,266	5,358						
Columbiana .....	2,328	22,219	4,461	10					
Coshocton .....	17,737	531,552	17,897	5	130	1			37
Crawford .....	12,556	223,740	11,293	7	261		71	1,710	10
Cuyahoga .....	23,703	738,767	26,842	2	60		27	1,045	141
Darke .....	11,480	464,307	11,610	19	160		42	600	38
Defiance .....	32,700	694,651	35,428	25	337	50	944	19,240	55
Delaware .....	26,932	653,153	35,896		28		8		1,237
Delaware .....	10,571½	137,133	10,064				264	4,497	23
Erie .....	13,839	560,423	15,003		130	5			266
Fairfield .....	2,397	32,135	2,660	4					
Fayette .....	2,051	28,104	2,621	42	10	3		160	17
Franklin .....	7,920	129,674	9,154	1	100	20	4	35,574	1,664
Fullon .....	24,373	702,451	28,261	4					
Gallia .....	1,005	10,151	1,263						
Geauga .....	15,153	504,539	17,004				5	130	15
Greene .....	4,092	60,148	12,392	30	375	12			19
Guernsey .....	5,696	85,788	5,075	20	176	17	2	60	19
Hamilton .....	1,171	15,424	3,697	72	1,430				41
Hancock .....	15,400	578,123	25,413	42	1,595	8	304	7,647	302
Hardin .....	15,690	362,619	19,070	45	1,100	68	34	600	80
Harlan .....	6,932	160,114	7,524	2			6	76	22
Henry .....	22,526	1,062,717	20,797	32	1,063	71	2,318	55,915	2,508
Highland .....	1,853	13,295	2,142						
Hocking .....	1,140	10,094	1,139	3	40		8	25	17
Holmes .....	13,000	501,788	17,370	8			10	189	14



[illegible]

## AGRICULTURAL STATISTICS—Continued.

Counties.	Corn.			Ensilage Corn.		Broom Corn.		Sugar Corn.	
	Acres planted 1908.	Bushels produced 1908. (shelled)	Acres planted (estimated) for crop of 1909.	Acres planted 1908.	Acres planted (estimated) for crop of 1909.	Acres planted 1908.	Pounds broom produced 1908.	Acres planted 1908.	Tons produced 1908.
Adams .....	2,364	854,571	35,987	20	10	6	.....	.....	28
Allen .....	37,438	1,694,028	41,085	73	35	26	.....	.....	100
Ashland .....	23,168	1,883,171	23,103	4,254	3,982	8	.....	.....	53
Ashtabula .....	13,490	451,487	15,372	46	60	54	.....	.....	8
Athens .....	11,235	385,025	11,681	46	45	1	200	.....	1,605
Auglaize .....	46,303	2,149,990	50,394	429	616	44	.....	.....	2,620
Belmont .....	17,123	653,836	19,410	40	.....	9	2,300	.....	152
Brown .....	42,982	1,010,959	46,711	57	74	.....	.....	.....	.....
Butler .....	50,347	1,418,488	66,440	40	.....	.....	.....	.....	.....
Carroll .....	12,829	448,154	12,233	68	57	26	20,840	.....	.....
Champaign .....	54,147	2,328,250	61,577	2	208	.....	.....	.....	571
Clark .....	43,541	1,868,306	52,745	183	164	.....	.....	.....	60
Clermont .....	33,799	682,133	38,180	811	855	5	1,500	.....	376
Clinton .....	59,268	2,242,795	68,420	63	91	.....	.....	.....	914
Columbiana .....	15,305	541,895	16,832	1,690	1,697	.....	.....	.....	88
Coshocton .....	24,657	919,950	25,960	11	1	.....	.....	.....	23
Crawford .....	34,423	1,276,118	37,151	40	37	.....	.....	.....	28
Cuyahoga .....	6,847	229,609	6,646	1,084	1,517	28	1,675	.....	105
Darke .....	82,528	2,967,610	11	.....	11	3	.....	.....	4
Defiance .....	29,098	1,098,047	49	49	52	.....	.....	.....	.....
Delaware .....	35,682	1,325,430	39,203	530	563	.....	.....	.....	354
Erie .....	15,033	588,250	15,391	61	296	.....	.....	.....	129
Fairfield .....	47,367	1,968,534	50,969	.....	.....	.....	.....	.....	514
Fayette .....	38,576	1,421,492	41,832	.....	.....	.....	.....	.....	369
Franklin .....	49,690	1,814,794	56,239	.....	286	.....	.....	.....	386
Fulton .....	22,711	1,479,630	36,007	571	277	.....	.....	.....	129
Gallia .....	17,711	476,817	21,174	399	.....	.....	.....	.....	78
Geauga .....	8,125	277,259	9,396	.....	4,037	.....	.....	.....	78
Green .....	53,147	2,346,950	66,037	124	188	.....	.....	.....	308
Guernsey .....	15,387	468,275	16,962	100	117	.....	.....	.....	.....
Hamilton .....	14,040	391,447	15,634	239	223	.....	.....	.....	4,390
Hancock .....	47,954	1,934,647	53,551	42	36	6	4,000	.....	.....
Hardin .....	22,644	1,299,497	34,513	10	.....	.....	.....	.....	400
Harrison .....	10,181	424,062	10,215	12	15	.....	.....	.....	.....
Henry .....	62,990	2,359,492	62,441	28	27	.....	.....	.....	972
Highland .....	51,733	1,402,436	57,518	65	.....	.....	.....	.....	.....
Hocking .....	12,349	1,383,129	14,912	5	5	.....	.....	.....	.....
Holmes .....	22,141	920,775	22,153	.....	.....	.....	.....	.....	.....

30,783	1,077,847	32,719	172	150	44	129
12,472	321,907	10,494	241	262	20	56
39,539	921,770	3,727	666	468	142	708
19,514	312,015	13,706	435	501	157	69
44,570	1,832,042	51,248	22	18	170	104
45,836	1,787,813	53,381	2,085	2,118	17	283
17,673	597,474	18,330	973	1,065	23	385
24,463	913,824	22,379	1,475	1,459	533	914
62,433	2,646,300	76,630	1,475	1,459	29	43
13,174	485,313	13,942	107	103	22	68
43,081	1,743,740	47,117	965	825	6	16
20,444	774,475	21,035	42	46	10	6
11,966	371,841	13,897	13	5	54	43
46,938	1,940,871	52,619	20	67	17	589
50,272	2,022,971	53,917	31	47	226	2
15,249	459,196	16,655	284	204	2	12
40,888	1,400,439	50,011	10	12	82	1,411
13,571	450,750	14,742	4	20	2	4
28,449	964,130	26,706	18	20	13	11
24,574	857,590	27,063	2,490	60	1	5,375
14,631	475,265	15,793	86	2,404	10	100
20,941	775,023	21,559	180	42	4	1,217
46,166	2,060,716	69,274	13	194	15	1,747
16,265	577,439	17,850	14	14	64	115
70,862	2,761,578	74,112	3	235	12	12
26,265	840,862	29,266	2,490	2,720	2	2
13,966	473,435	14,748	2,490	2,720	13	23
86,499	6,216	6,216	86	38	23	68
23,574	2,181,757	64,499	27	30	18	21
56,342	31,466	31,466	194	10	92	285
37,410	2,049,569	61,050	13	1	1,231	4,705
21,462	1,635,969	22,968	9	86	91	204
46,823	712,672	52,968	14	65	2	3
50,943	1,683,569	54,962	38	65	2	3
10,906	1,723,529	31,155	454	49	2	3
13,183	558,619	16,316	233	235	13	23
19,339	417,493	14,510	3,081	2,720	23	68
48,837	684,942	19,204	64	38	7	21
49,942	1,648,184	49,220	17	10	18	4,400
11,663	2,247,270	57,165	311	373	92	285
44,337	236,520	13,514	64	86	1,231	4,705
17,299	1,238,370	53,890	71	65	91	204
36,231	526,060	19,650	17	18	2	3
29,668	1,461,294	35,232	49	49	2	3
82,604	3,036,213	30,433	82,461	81,298	9,538	37,774
33,752	3,093,579	93,369	82,461	81,298	9,538	37,774
2,840,594	1,341,944	36,380	82,461	81,298	9,538	37,774
Totals	102,622,908	3,050,825	82,461	81,298	9,538	37,774



Holmes	8	1,975	175	150,340	783	82,457	913	1	50
Huron	35	7,160	3	100	1,433	117,919	1,643	1	50
Jackson	19	3,300	24	2,000	280	18,737	241	1	50
Jefferson	34	4,560	2	4,913	871	83,250	884	2	11
Knox	114	1,100	6	11,000	533	22,533	1,248	84	10,538
Lake	644	7,185	4	2,000	2,020	129,953	2,171	36	180
Lawrence	70	19,920	153	10,535	500	42,678	533	11	125
Licking	473	106,379	153	10,535	1,308	136,534	1,564	11	125
Logan	70	19,920	153	10,535	508	41,932	574	11	125
Lorain	473	106,379	153	10,535	2,866	247,702	3,120	11	125
Lucas	70	19,920	153	10,535	3,147	249,541	3,227	11	125
Madison	304	7,591	41	6,760	89	8,260	98	11	125
Mahoning	304	7,591	41	6,760	2,560	293,362	3,505	11	125
Marion	5	710	6	1,400	777	64,644	707	11	125
Medina	10	2,530	172	802,800	3,406	352,910	4,339	11	125
Melgs	63	6,030	172	802,800	768	63,104	633	11	125
Mercer	152	24,008	172	122,100	713	46,547	633	11	125
Miami	7	775	1	3,604	1,080	73,505	1,202	11	125
Monroe	14	2,390	7	65	1,348	99,673	1,343	11	125
Montgomery	109	13,715	1	14,000	1,729	46,335	810	11	125
Morgan	1	250	1	65	337	25,196	445	11	125
Morrow	371	6,000	124	10,240	1,271	123,931	1,534	61	675
Muskingum	211	42,695	1	1,000	1,011	78,832	1,020	61	675
Noble	38	6,400	1	1,000	681	46,440	545	61	675
Ottawa	1	400	1	1,000	671	41,536	707	61	675
Paulding	1	400	1	1,000	294	27,605	340	61	675
Perry	298	96,303	270	169,588	1,543	64,598	1,614	61	675
Pickaway	7	835	270	169,588	331	33,291	279	61	675
Pike	145	16,731	1	1,000	551	43,140	563	61	675
Portage	29	3,228	1	1,000	10,480	737,256	8,012	61	675
Preble	29	3,228	1	1,000	283	16,619	259	61	675
Putnam	984	6,490	15	13,900	1,114	113,832	1,181	61	675
Ross	13	300	356	331,240	2,157	233,538	2,505	61	675
Sandusky	27	3,875	26	30,585	1,198	62,650	694	61	675
Seneca	54	800	1	600	2,347	237,553	2,498	61	675
Shelby	34	11,185	1	600	1,177	132,084	1,290	61	675
Stark	9	1,835	1	3,250	1,965	140,093	2,153	61	675
Summit	114	1,875	1	1,125	716	56,299	1,177	61	675
Tumblin	34	1,875	1	1,125	4,565	498,140	5,239	61	675
Tuscarawas	26	5,200	5	4,000	3,043	412,006	3,905	61	675
Union	20	3,780	1	4,000	3,043	308,411	3,595	61	675
Van Wert	37	5,510	8	80	1,394	161,748	1,648	61	675
Vinton	30	60,240	100	46,900	1,394	13,475	1,639	61	675
Warren	30	60,240	100	46,900	909	70,569	964	61	675
Washington	30	60,240	100	46,900	423	29,111	433	61	675
Wayne	30	60,240	100	46,900	783	12,065	330	61	675
Williams	30	60,240	100	46,900	1,391	156,346	2,008	61	675
Wood	30	60,240	100	46,900	6,175	697,558	6,899	61	675
Wyandot	30	60,240	100	46,900	501	45,510	501	61	675
Totals	5,241	805,021	1,787	1,412,719	134,667	10,555,238	132,013	307	22,238

## AGRICULTURAL STATISTICS—Continued.

Counties.	Onions.		Meadow.		Clover.			
	Acres planted 1908.	Bushels produced 1908.	Acres in grass other than clover 1908.	Tons of hay produced 1908.	Acres grown 1908.	Tons of hay produced 1908.	Bushels of seed produced 1908.	Acres plowed under for manure 1908.
Adams .....	.....	.....	17,444	14,885	4,788	4,087	3,785	121
Allen .....	.....	.....	23,759	31,540	15,944	21,223	20,822	400
Ashland .....	.....	.....	28,044	32,761	18,218	24,227	8,190	140
Ashubula .....	116	42,653	56,071	22,651	1,578	2,701	8,838	9
Athens .....	.....	.....	21,833½	22,608	1,464	2,575	94	13
Aurialze .....	1	60	13,812	17,080	16,225	20,701	21,107	419
Belmont .....	.....	.....	40,328	43,383	3,056	3,880	1,901	65
Brown .....	.....	.....	22,019	16,739	2,804	1,912	1,707	108
Butler .....	.....	.....	19,788	21,009	20,832	16,073	11,085	4,982
Carroll .....	9	2,010	32,984	32,315	4,079	4,878	2,984	.....
Champaign .....	1	285	13,953	18,485	18,535	21,875	20,122	802
Clark .....	4½	275	16,946	21,975	11,067	14,168	12,432	965
Clermont .....	1	75	31,346	21,232	3,640	3,143	12,121	284
Columbiana .....	2	1,000	37,098	17,062	18,339	10,582	2,081	1,035
Coshocton .....	.....	.....	37,909	48,250	7,626	10,744	9,902	21
Crawford .....	4	45	35,297	37,370	9,571	11,822	13,810	64
Cuyahoga .....	1	100	22,760	31,637	19,944	29,607	26,991	60
Darke .....	2	4,535	20,206	26,753	2,666	5,276	52	713
Defiance .....	1½	82	15,111	17,866	34,545	36,776	26,991	1,205
Delaware .....	20	20	22,118	20,170	18,659	22,239	12,607½	704
Erie .....	23	6,225	38,719	45,519	6,711	12,653	12,607	1,253
Fairfield .....	17	1,180	9,324	11,564	6,211	8,432	4,120	353
Fayette .....	9	1,112	35,292	49,381	20,545	15,686	21,620	543
Franklin .....	47	7,522	8,804	8,664	4,759	15,061	6,062	223
Fulton .....	1	1,225	38,908	44,118	9,725	10,348	11,702	640
Galla .....	3	700	17,799	25,216	15,182	20,815	13,134	8
Geauga .....	37	6,045	20,117	17,816	2,434	20,815	13,134	45
Greene .....	4	423	26,451	36,729	2,354	3,672	449	35
Guernsey .....	4	340	15,463	18,757	15,167	15,149	14,988	2,769
Hamilton .....	54	6,698	40,876	40,647	1,257	1,867	1,106	1
Hancock .....	87	4,915	11,669	40,647	1,257	1,867	1,106	544
Hardin .....	2,107	463,848	21,263	30,653	23,400	92,348	21,226	773
Harrison .....	.....	.....	19,083½	28,061	8,584	11,271	11,751	422
Henry .....	.....	.....	34,981	25,272	1,188	1,271	1,271	.....
Hickman .....	.....	.....	17,531	17,210	18,586	1,561	24,490	1,753
HIGHLAND .....	.....	.....	23,884	17,210	6,893	5,530	21,472	228
Hocking .....	.....	.....	17,511	15,515	1,114	1,285	11,462	49

Holmes .....	991	19,987	22,387	13,887	18,870	9,907	5
Huron .....	113	23,587	15,583	22,109	13,022	12,118	105
Jackson .....	600	30,043	32,773	303	5,140	4	10
Jefferson .....	.....	4,985	13,627	4,986	8,982	1,829	8
Knox .....	324,356	14,353	7,245	757	1,119	14	83
Lake .....	1,505	7,280	7,387	352	15,783	17,118	43
Lawrence .....	7,625	57,272	61,503	11,454	15,783	17,118	54
Licking .....	2,762	15,960	22,236	22,132	17,825	21,673	1,082
Logan .....	3,810	36,731	49,547	10,691	17,825	21,673	67
Louis .....	103,821	11,600	17,062	4,456	5,982	6,124	289
Lucas .....	1,644	16,632	18,962	11,082	12,907	1,087	1,087
Madison .....	55	34,531	46,483	4,500	7,253	1,280	43
Mahoning .....	2,550	26,963	39,111	14,197	20,179	17,178	2,463
Medina .....	8,655	26,680	39,111	14,783	21,733	6,592	87
Melms .....	2	15,064	19,887	21,514	29,502	151	151
Mercer .....	200	15,008	19,887	10,843	11,758	1,519	128
Miami .....	220	32,410	33,962	8,622	9,833	26,844	1,519
Montgomery .....	1,090	19,222	22,905	9,799	9,833	8,753	3
Morgan .....	.....	27,562	29,018	1,976	3,717	5,711	80
Morrow .....	.....	76,921	37,792	13,634	22,572	12,984	89
Muskingum .....	1,150	45,206	47,789	1,566	6,428	2,414	9
Noble .....	.....	32,269	35,015	1,566	2,100	2,918	150
Ottawa .....	15,321	20,381	35,015	6,940	8,535	3,153	9
Paulding .....	.....	22,891	30,891	14,130	17,003	1,368	1,368
Perry .....	.....	22,995	23,714	61,970	10,302	315	315
Pickaway .....	50	18,861	18,562	11,647	10,352	4,884	4,884
Pike .....	2,475	10,410	9,306	4,409	2,782	2,965	879
Portage .....	55,640	27,483	84,179	6,440	9,378	2,088	26
Pueblo .....	2,990	7,353	7,360	28,673	20,708	11,088	13,738
Putnam .....	260	20,601	26,442	18,211	20,708	22,630	829
Richland .....	16,765	23,139	32,644	20,031	27,689	14,441	105
Ross .....	12,948	14,800	8,697	6,842	6,842	10,353	1,898
Sandusky .....	290	18,487	21,571	10,857	13,954	9,212	9
Seneca .....	1,295	13,585	20,242	1,449	1,179	312	405
Shelby .....	36,740	24,901	31,922	26,586	36,844	26,240	1,131
Stark .....	125	12,822	15,104	16,647	19,397	15,544	1,544
Summit .....	815	46,302	62,114	12,193	15,506	104	104
Tuscarawas .....	12,685	20,869	28,878	7,351	11,172	6,795	165
Union .....	686	62,535	68,079	1,688	2,242	2,242	165
Van Wert .....	1,110	41,276	43,993	1,159	2,242	2,242	165
Warren .....	.....	27,979	37,387	4,983	6,107	4,821	7
Washington .....	.....	24,469	34,724	15,239	21,380	17,775	53
Wayne .....	.....	19,246	13,850	16,575	23,307	18,618	1,024
Williams .....	31	22,905	11,761	442	9,712	63	7,898
Wood .....	1,914	37,576	33,943	1,905	2,283	968	968
Wyandot .....	184,475	25,092	34,862	26,049	39,685	10,815	190
Totals .....	1,344,191	26,516	35,627	17,786	21,167	18,668	137
Totals .....	1,344,191	26,516	35,627	17,786	21,167	18,668	137
Totals .....	1,344,191	26,516	35,627	17,786	21,167	18,668	137
Totals .....	1,344,191	26,516	35,627	17,786	21,167	18,668	137
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Totals .....	1,344,191	26,516	35,627	17,786	21,167	18,668	137
Totals .....	1,344,191	26,516	35,627	17,786	21,167	18,66	

## AGRICULTURAL REPORT.

## AGRICULTURAL STATISTICS—Continued

Counties.	Alfalfa.		Flax.			Tobacco.		Milk. Gallons sold for family use 1908.
	Acres grown in 1908.	Tons of hay in 1908.	Acres sown 1908.	Bushels of seed 1908.	Pounds of mre 1908.	Acres planted 1908.	Pounds pro- duced 1908.	
Adams	73	155	8	.	.	2,653	2,317,759	15,825
Allen	188	329	411	3,707	187,600	.	.	367,450
Ashland	16	21	.	.	.	.	.	118,416
Ashabula	7	9	.	.	.	.	.	11,767,090
Ashabula	365	826	.	.	.	1	1,075	182,985
Athens	341	615	.	.	.	9	4,300	111,365
Auglaize	60	57	.	.	.	580	709,945	687,970
Belmont	144	151	.	.	.	890	202,755	202,755
Brown	144	151	.	.	.	1,429	679,960	800,733
Butler	830	1,823	.	.	.	.	11	30,500
Carroll	2	2	1	4	.	.	69,000	342,553
Champaign	793	2,168	.	.	.	81	180,000	918,213
Clerk	313	760	.	.	.	213	222,320	1,294,174
Clermont	846	1,317	.	.	.	334	6,650	1,26,880
Clinton	178	382	.	1	.	11	2,120	1,346,112
Columbiana	21	31	.	.	.	.	.	102,875
Coschocton	73	161	.	.	.	.	.	210,005
Crawford	5	15	.	.	.	.	.	2,843,329
Cuyahoga	8	9	.	.	.	.	.	223,976
Darke	185	317	.	.	.	15,798	12,463,324	296,470
Defiance	50	116	.	.	.	.	.	747,154
Delaware	234	550	.	.	.	.	.	400,780
Erie	149	300	.	.	.	.	.	222,911
Fairfield	38	73	.	.	.	.	.	51,795
Fayette	70	123	.	.	.	.	.	2,636,990
Franklin	378	997	.	.	.	3	3,000	2,116,528
Fulton	276	659	.	.	.	1,005	837,305	38,090
Galla	32	78	.	.	.	.	.	1,660,908
Geauga	11	22	15	100	100	.	.	602,440
Greene	354	655	.	.	.	.	.	261,705
Guernsey	83	61	5	20	100	531	100,870	207,770
Hamilton	1,837	2,767	5	.	.	561	20,144	1,778,688
Hancock	46	77	.	.	.	.	.	165,852
Hardin	148	356	.	.	.	.	.	56,127
Harrison	40	87	.	.	.	.	.	79,770
Henry	67	124	.	.	.	.	.	103,875
Highland	307	915	2	8	.	35	21,845	38,865
Hocking	46	91	.	.	.	.	.	59,444



Holmes	75	106	1,224	51,300	58,520
Huron	87				281,610
Jackson	9				48,665
Jefferson	39				769,776
Knott	143				121,194
Knox	85				887,238
Laurens	204				189,083
Licking	39				1,044,383
Lincoln	1,467				248,400
Logan	45	7	40		2,574,521
Lucas	813				1,493,897
Madison	420				1,000
Mahoning	726				1,400
Marion	2				1,395,893
Medina	13	6	23		273,046
Melms	24				714,887
Mercer	15				63,480
Miami	30				25,425
Monroe	356				5,221,470
Montgomery	182				444,019
Morgan	205				831
Morrow	206				16,138
Muskingum	2,016	6	7	2	9,692,050
Muskingum	1,070				17,690
Muskingum	73				115,098
Muskingum	54				670,530
Muskingum	69				8,640
Muskingum	123	2	10		8,800
Muskingum	71				9
Muskingum	361				10
Muskingum	37				76
Muskingum	36				51,445
Muskingum	18				9,000
Muskingum	231				1,240
Muskingum	130				185,950
Muskingum	33				61,258
Muskingum	56				1,443,974
Muskingum	19				229,846
Muskingum	842				167,197
Muskingum	563				478,382
Muskingum	15				174,430
Muskingum	34				14,909
Muskingum	10				261,370
Muskingum	821				14,909
Muskingum	87				186,910
Muskingum	236				305,163
Muskingum	126				2,670,745
Muskingum	144				4,395,261
Muskingum	270	1	7		2,292,600
Muskingum	114				417,901
Muskingum	165				1,153,302
Muskingum	4				53
Muskingum	4				4,000
Muskingum	87				5,500
Muskingum	12				400
Muskingum	371	12	15		1,432,435
Muskingum	69	25	25		539,767
Muskingum	122				270,812
Muskingum	2				1,436,539
Muskingum	483	3			244,370
Muskingum	113	27	235	19,000	101,870
Muskingum	320				
Muskingum	113				
Muskingum	5				
Muskingum	10				
Muskingum	145				
Muskingum	773				
Muskingum	764				
Muskingum	404				
Totals	16,236	610	5,325	298,002	64,295,921

## AGRICULTURAL STATISTICS—Continued.

Counties.	Butter.		Cheese.		Eggs.	
	Pounds made in home dairies 1908.	Pounds made in factories and cream- eries 1908.	Pounds made in home dairies 1908.	Pounds made in factories and cream- eries 1908.	Number dozen produced 1908.	Number dozen shipped de- void state 1908.
Adams .....	375,988	11,200	19,110	.....	855,039	8,000
Allen .....	527,770	2,450	5,300	24,260	1,071,314	.....
Ashtabula .....	538,150	23,310	3,065	1,983,825	737,800	830
Athens .....	836,596	23,938	.....	100	1,042,566	.....
Aurora .....	845,121	23,207	.....	.....	861,725	750
Auglaize .....	843,680	810,840	1,800	.....	1,067,960	2,900
Belmont .....	704,332	11,600	4,610	.....	1,822,494	80,890
Brown .....	523,236	38,000	.....	.....	1,154,510	15
Butler .....	698,889	.....	12,765	.....	714,329	28,660
Carroll .....	473,459	80,881	6,500	.....	663,019	30,600
Champaign .....	330,614	180,983	.....	.....	664,445	.....
Clark .....	623,198	2,950	.....	.....	433,915	.....
Clermont .....	823,171	450	160	.....	860,925	.....
Clinton .....	342,602	24,860	.....	.....	768,980	.....
Columbiana .....	600,656	110,890	160	246,168	919,239	1,800
Coshocton .....	615,806	13,440	.....	78,620	823,674	.....
Crawford .....	694,812	.....	.....	.....	944,941	.....
Cuyahoga .....	664,111	35,700	200	.....	548,407	.....
Darke .....	836,372	170,490	.....	6,000	1,836,116	20
Delaware .....	397,804	74,860	.....	.....	1,063,583	.....
Delaware .....	327,504	432,975	.....	19	944,984	250,000
Erie .....	314,030	2,000	824,862	.....	327,870	.....
Fairfield .....	703,418	61,030	.....	.....	1,196,083	.....
Fayette .....	863,196	.....	.....	.....	203,047	.....
Franklin .....	862,340	61,805	.....	.....	790,717	400
Franklin .....	1,396,070	112,300	108,608	686,525	1,204,744	.....
Fulton .....	416,882	3,400	.....	.....	730,737	.....
Galila .....	77,990	185,669	.....	816,978	756,624	.....
Geauga .....	636,200	.....	3,000	.....	795,170	5,020
Greene .....	606,693	6,095	4,000	.....	627,763	200
Guernsey .....	633,073	1,900	1,900	.....	316,622	13,450
Hamilton .....	828,780	200	.....	.....	1,040,436	100
Franklin .....	217,156	1,534	.....	55	624,960	17,118
Hardin .....	378,446	78,490	600	.....	453,985	10,200
Harrison .....	678,467	18,270	2,260	.....	1,816,614	.....
Henry .....	490,122	19,300	.....	.....	891,961	.....
Hocking .....	289,786	.....	.....	.....	337,996	.....

Holmes .....	432,021	182,566	9,260	766,840	945,547	.....
Huron .....	600,467	20,750	12,000	.....	933,187	60
Jackson .....	283,542	3,275	.....	.....	323,770	.....
Jefferson .....	483,746	64,660	.....	.....	488,806	.....
Knox .....	946,706	.....	.....	.....	946,735	.....
Lake .....	373,710	770	.....	.....	373,207	.....
Lawrence .....	573,710	320	500	.....	573,941	925
Licking .....	367,133	253,396	1,200	28,130	1,67,202	.....
Logan .....	457,332	35,588	.....	23,000	513,677	.....
Loren .....	537,322	607,810	6,000	634,885	913,152	200
Lorain .....	433,305	12,581	1,000	.....	540,405	200
Lucas .....	154,758	6,200	2,200	.....	390,170	.....
Madison .....	889,241	501,542	18,387	163,533	735,280	.....
Manitowish .....	525,241	.....	.....	.....	704,182	570
Marion .....	632,036	714,945	28,430	171,276	1,453,624	1,400
Medina .....	372,771	63,335	5,765	.....	430,506	.....
Meigs .....	451,227	20,000	1,000	.....	1,273,920	.....
Mercer .....	467,410	8,610	2,400	.....	613,244	.....
Miami .....	883,841	7,220	245,300	363,180	814,705	49,405
Monroe .....	478,735	68,850	.....	.....	845,070	.....
Montgomery .....	546,673	.....	.....	846	1,135,057	150
Morrow .....	763,894	199,353	.....	.....	803,413	700
Muskingum .....	573,750	28,150	200	.....	770,389	.....
Noble .....	351,636	.....	.....	.....	454,455	.....
Ottawa .....	423,600	6,170	.....	.....	1,290,420	100
Paulding .....	927,643	.....	.....	.....	693,630	.....
Perry .....	343,663	.....	.....	.....	623,738	.....
Pickaway .....	106,539	1,200	1,000	.....	441,08	.....
Portage .....	604,435	182,596	6,750	258,313	733,415	2,426
Putnam .....	1,052,030	283,025	51,000	.....	938,723	.....
Richland .....	817,491	3,060	4,000	.....	1,277,042	129,170
Ross .....	237,338	.....	.....	.....	711,511	1,200
Sandusky .....	606,635	109,112	1,000	.....	596,794	800
Seneca .....	338,862	.....	.....	.....	731,233	.....
Shelby .....	508,141	17,220	1,000	.....	851,507	200
Stark .....	387,127	2,300	1,200	.....	1,133,533	.....
Summit .....	764,646	373,072	113,210	835,025	834,486	.....
Tuscarawas .....	502,941	278,083	27,100	6,500	1,202,089	600
Union .....	461,057	169,702	171,745	633,712	631,121	.....
Van Wert .....	473,592	33,204	69,560	453,062	618,860	7,150
Vinton .....	248,619	40,863	300	.....	1,121,990	.....
Washington .....	706,605	4,810	33	.....	1,119,176	.....
Wayne .....	926,131	47,665	120	.....	341,19	600
Williams .....	430,876	151,402	1,000	233,540	1,018,145	20,720
Wood .....	866,236	144,785	76,065	153,322	1,311,409	450
Wyandot .....	319,435	148,860	3,000	.....	1,167,641	.....
Totals .....	48,026,883	7,941,513	1,919,844	3,591,072	72,160,883	676,289

## AGRICULTURAL STATISTICS—Continued.

Counties.	Sorghum.			Maple Products.			Honey.	Bees.
	Acres planted 1908.	Pounds of sugar 1908.	Gallons of syrup 1908.	Number trees from which syrup was made 1908.	Pounds of sugar 1908.	Gallons of syrup 1908.	Pounds of honey 1908.	Number of hives 1908.
Adams .....	19	.....	207	2,123	.....	728	6,160	1,012
Allen .....	9	.....	504	13,486	160	4,326	496	7,960
Ashland .....	.....	.....	.....	88,968	14,220	29,168	4,812	482
Ashtabula .....	.....	100	3,410	279,019	33,426	94,730	66,897	1,809
Athens .....	1	.....	40	1,253	176	446	2,046	.....
Auglaize .....	169	2,831	3,007	14,849	55	6,618	9,224	682
Belmont .....	6	.....	249	1,342	.....	787	6,496	412
Brown .....	3	.....	187	1,176	.....	72	7,189	686
Butler .....	.....	.....	.....	1,365	.....	508	7,203	430
Carroll .....	.....	.....	.....	415	.....	250	8,945	180
Champaign .....	1	.....	86	13,965	420	7,242	15,801	409
Clark .....	1	.....	422	210	.....	290	14,961	877
Clermont .....	8	.....	155	1,155	.....	652	8,760	228
CClinton .....	.....	.....	43	25,123	490	10,224	8,883	328
Columbiana .....	14	.....	45	29,535	1,553	11,724	3,908	320
Coshocton .....	4	1	249	1,067	.....	764	3,877	307
Crawford .....	.....	.....	76	22,961	862	10,520	7,392	365
Cuyahoga .....	6	.....	.....	65,213	5,063	27,492	167	2,526
Darke .....	.....	.....	675	8,343	.....	2,818	20,264	1,553
Defiance .....	35	.....	2,995	13,864	77	6,083	24,876	663
Delaware .....	44	.....	38	27,544	215	13,617	5,285	224
Erie .....	.....	.....	.....	8,780	700	4,665	10,770	215
Fairfield .....	.....	.....	.....	3,801	.....	2,141	7,069	481
Fayette .....	1	.....	125	.....	.....	.....	679	38
Franklin .....	.....	.....	.....	620	.....	797	10,716	486
Fullon .....	44	25	190	4,833	.....	1,181	2,631	149
Galla .....	57	.....	4,749	610	10	141	8,983	828
Genesee .....	.....	.....	.....	667,616	33,109	296,349	12,679	445
Greene .....	4	25	141	13,325	.....	11,710	13,195	960
Hamilton .....	39	169	1,875	75	.....	35	9,212	593
Hamsey .....	.....	.....	.....	277	.....	187	3,402	232
Hancock .....	2	.....	146	13,688	.....	7,116	18,294	860
Hardin .....	4	29	89	2,716	.....	1,230	8,326	346
Harrison .....	64	.....	.....	883	.....	673	2,605	106
Henry .....	9	20	1,401	1,040	100	.....	6,098	2,363
HIGHLAND .....	.....	.....	.....	5,557	.....	2,705	8,794	650
Hocking .....	9	.....	580	447	.....	215	1,140	207

Holmes	2	100	4,800	1,302	1,700	4,815	285
Huron	7	96	69,188	3,776	25,667	23,510	770
Jackson	2	333	2,062	20	1,217	2,591	232
Jefferson	2	77	23,368	1,530	8,121	5,722	1,065
Knox	209	15,061	39,668	3,860	16,500	7,913	3,871
Lake	3	383	35,555	140	13,077	820	729
Lawrence	9	50	83,069	92,313	50,030	1,296	11,064
Licking	1	20	86,793	10,054	34,951	10,430	636
Logan	1	20	585	71	207	5,180	490
Lucas	1	20	585	71	207	7,347	201
Madison	1	20	585	71	207	7,347	365
Mahoning	1	20	585	71	207	7,347	365
Marion	4	140	97,724	4,317	43,647	6,235	220
Medina	117	70	217,446	27,473	1,406	9,783	522
Melms	117	70	217,446	27,473	1,406	9,783	522
Mercer	79	117	114	100	38,307	23,006	946
Miami	10	5,029	195	150	66	5,515	710
Montroe	10	255	4,839	150	2,446	10,709	479
Montgomery	14	438	3,337	60	87	2,820	177
Morgan	3	125	3,337	60	87	5,578	519
Morrow	1	12	36,634	2,410	1,406	11,364	1,368
Muskingum	13	982	36,634	2,410	1,406	5,570	493
Noble	13	982	36,634	2,410	1,406	2,438	707
Ottawa	13	982	36,634	2,410	1,406	6,304	353
Paulding	8	438	393	270	174	6,890	379
Perry	2	125	6,900	270	4,144	5,890	169
Pickaway	2	125	6,900	270	4,144	13,555	840
Pike	13	761	372,634	3,651	171,068	1,565	7,369
Portage	13	761	372,634	3,651	171,068	630	34
Preble	5	900	2,490	50	1,073	1,625	437
Putnam	5	172	1,250	50	1,073	6,618	743
Richland	5	172	76,424	7,345	592	17,441	910
Ross	2	103	4,835	90	1,705	8,925	515
Sandusky	2	92	2,153	90	1,705	946	493
Scioto	55	3,566	29,325	390	9,574	7,395	367
Seneca	4	215	29,325	390	9,574	3,253	151
Shelby	57	3,418	25,735	73	8,401	4,438	575
Stark	1	78	43,517	14,150	483	8,401	24,099
Summit	10	5	215,911	2,719	84,747	9,464	484
Tuscarawas	10	499	215,911	2,719	84,747	7,084	454
Union	1	64	12,677	2,227	600	7,540	396
Van Wert	7	376	12,677	2,227	600	17,830	540
Vinton	1	30	516	179	3,485	3,006	355
Warren	1	30	516	179	3,485	18,878	908
Washington	10	743	5,665	300	1,253	18,010	1,111
Wayne	7	2,473	23,026	635	2,812	1,253	385
Williams	4	435	37,640	1,225	8	4,135	305
Wood	14	771	1,741	157	12,278	3,942	1,111
Wyandot	44	635	9,443	140	15,724	14,470	1,318
Totals	1,009	62,075	2,984,975	263,331	1,274,115	780,643	102,357



Holmes	2,753,040	24,651	2,582,750	.....	.....	.....	.....	.....	150
Huron	6,499,090	57,520	4,852,060	.....	.....	.....	.....	.....	.....
Jackson	1,531,110	17,132	1,493,095	.....	.....	.....	.....	.....	100
Jefferson	1,533,235	11,403	2,688,150	.....	.....	.....	.....	.....	8,090
Knox	2,890,413	28,026	1,790,152	.....	.....	.....	.....	.....	505
Lake	1,745,102	28,977	1,119,072	.....	.....	.....	.....	.....	.....
Lawrence	1,155,000	1,018	3,675,400	.....	.....	.....	.....	.....	2
Licking	4,132,941	42,018	3,884,100	.....	.....	.....	.....	.....	3,140
Logan	868,616	45,106	3,670,700	.....	.....	.....	.....	.....	6,727
Lorain	4,239,600	43,456	3,575,335	.....	.....	.....	.....	.....	20
Lucas	671,933	1,432	31,750	.....	.....	.....	.....	.....	.....
Madison	694,850	5,034	4,291,780	.....	.....	.....	.....	.....	50
Maioning	5,156,500	54,052	4,153,600	.....	.....	.....	.....	.....	.....
Marion	7,916,525	9,739	6,635,882	.....	.....	.....	.....	.....	8
Medina	7,136,071	108,897	1,451,942	.....	.....	.....	.....	.....	.....
Melms	1,852,416	20,680	1,461,800	.....	.....	.....	.....	.....	20
Mercer	862,800	23,400	1,451,855	.....	.....	.....	.....	.....	2,950
Miami	2,556,800	23,570	1,451,855	.....	.....	.....	.....	.....	400
Monroe	1,538,540	18,439	3,623,120	.....	.....	.....	.....	.....	10
Montgomery	5,004,200	57,096	1,394,300	.....	.....	.....	.....	.....	315
Morgan	1,890,535	23,187	1,394,300	.....	.....	.....	.....	.....	80
Morrow	3,257,530	27,938	2,543,610	.....	.....	.....	.....	.....	64
Muskingum	3,152,530	30,338	774,515	.....	.....	.....	.....	.....	8
Noble	1,042,510	10,437	20,000	.....	.....	.....	.....	.....	150
Ottawa	20,000	500	20,000	.....	.....	.....	.....	.....	.....
Paulding	67,855	719	4,575,394	.....	.....	.....	.....	.....	217,700
Perry	4,247,735	44,221	3,613,323	.....	.....	.....	.....	.....	5
Pickaway	6,851,906	46,943	2,147,553	.....	.....	.....	.....	.....	.....
Pike	2,632,060	25,321	4,584,070	.....	.....	.....	.....	.....	316
Portage	5,114,174	59,186	6,768,125	.....	.....	.....	.....	.....	.....
Preble	7,849,810	10,652	10,375	.....	.....	.....	.....	.....	.....
Putnam	34,575	79	3,065,707	.....	.....	.....	.....	.....	359
Richland	4,304,942	41,619	2,877,175	.....	.....	.....	.....	.....	.....
Ross	4,143,556	43,656	1,109,760	.....	.....	.....	.....	.....	150
Sandusky	2,259,650	20,172	3,281,423	.....	.....	.....	.....	.....	150
Scioto	3,216,300	32,113	4,361,023	.....	.....	.....	.....	.....	.....
Seneca	6,781,620	108,031	3,341,200	.....	.....	.....	.....	.....	227
Shelby	2,203,100	15,820	5,459,570	.....	.....	.....	.....	.....	.....
Stark	6,609,531	447,394	3,815,380	.....	.....	.....	.....	.....	140
Summit	3,811,600	45,386	2,646,964	.....	.....	.....	.....	.....	.....
Trumbull	3,439,190	42,736	752,950	.....	.....	.....	.....	.....	.....
Tuscarawas	1,735,720	19,963	368,866	.....	.....	.....	.....	.....	800
Union	738,700	6,493	10,700	.....	.....	.....	.....	.....	.....
Van Wert	24,900	444	741,000	.....	.....	.....	.....	.....	267
Vinton	1,169,200	14,232	1,231,445	.....	.....	.....	.....	.....	30
Warren	2,339,456	27,656	3,151,963	.....	.....	.....	.....	.....	.....
Washington	3,696,650	35,893	8,501,953	.....	.....	.....	.....	.....	225
Wayne	8,852,122	100,813	347,513	.....	.....	.....	.....	.....	227
Williams	666,300	6,674	468,366	.....	.....	.....	.....	.....	500
Wood	821,425	8,211	949,200	.....	.....	.....	.....	.....	100
Wyandot	1,656,080	17,589	177,771,223	.....	.....	.....	.....	.....	20
Totals	222,517,524	2,764,493	177,771,223	4,491	19,188	13,406,433	251,510	.....	.....

## AGRICULTURAL STATISTICS—Continued.

Counties.	Apples.		Peaches.		Pears.		Cherries.		Plums.		Other Small Fruits.	
	Acres occu- pied 1908.	Bushels pro- duced 1908.	Acres occu- pied 1908.	Bushels pro- duced 1908.	Acres occu- pied 1908.	Bushels pro- duced 1908.	Acres occu- pied 1908.	Bushels pro- duced 1908.	Acres occu- pied 1908.	Bushels pro- duced 1908.	Acres occu- pied 1908.	Bushels pro- duced 1908.
Adams	1,901	30,260	172	6,425	8	60	15	60	7	700	1	25
Allen	1,976	24,074	39	1,680	6	207	7	120	12	521	9	410
Ashtabula	2,322	62,885	83	6,332	2	436	2	483	24	121	13	890
Ashland	2,506	218,360	121	2,313	47	8,649	5	77	14	183	60	2,439
Athens	2,278	25,136	410	10,319	234	1,001	10	40	20	769	104	3,877
Auglaize	1,627	13,945	8	1,473	13	1,325	2	240	40	905	16	396
Belmont	1,804	45,806	216	4,738	118	4,701	56	1,211	84	1,852	160	6,548
Brown	1,846	8,878	31	1,187	2	94	.....	.....	.....	245	3	90
Butler	2,283	1,067	33	610	12	267	5	15	12	15	4	350
Carroll	3,483	55,063	103	5,220	12	687	4	560	15	1,258	24	1,911
Champaign	1,051	1,634	514	1,201	154	1,496	4	110	4	227	13	723
Clark	1,027	3,864	57	2,321	1	1,588	69	1,636	54	2,534	13	5,737
Clermont	2,967	8,505	636	7,438	476	10,757	38	386	24	201	382	8,630
Clinton	750	2,978	8	819	1	1,532	1	182	.....	776	6	382
Columbiana	5,469	127,689	102	6,041	19	1,732	22	382	24	1,613	296	11,969
Coshocton	4,747	121,360	639	11,462	30	771	6	288	.....	807	17	600
Crawford	3,167	73,546	8	2,156	1	661	7	168	5	90	42	2,296
Cuyahoga	2,562	68,571	27	1,136	51	5,367	10	382	62	1,117	580	21,781
Delaware	2,862	3,730	120	4,430	13	1,194	9	847	71	.....	.....	720
Deane	1,833	27,833	144	2,739	44	373	134	62	23	198	74	776
Delaware	1,833	27,831	144	2,739	44	373	134	62	23	198	74	776
Ellettsburg	1,561	66,036	539	23,466	48	1,739	33	1,852	17	535	243	10,500
Fairfield	2,979	30,321	178	23,390	13	1,364	8	1,852	8	361	161	3,860
Fayette	1,160	1,160	.....	.....	.....	.....	.....	.....	.....	110	.....	.....
Franklin	2,021	23,407	51	2,607	29	1,868	13	250	17	1,172	34	774
Fulton	2,652	19,442	53	2,601	3	86	.....	.....	.....	118	.....	70
Gallia	6,873	24,527	276	6,511	43	1,020	1	10	23	500	129	2,339
Geauga	2,833	124,501	41	1,411	60	7,701	2	216	21	208	129	1,728
Greene	4,316	4,360	44	1,411	7	700	6	271	6	276	20	1,798
Guernsey	4,753	46,237	300	9,965	10	2,049	10	173	20	648	22	672
Hamilton	2,749	3,063	1,040	8,965	1,090	10,749	12	339	6	246	335	12,174
Hancock	1,283	89,133	30	4,179	3	178	.....	.....	.....	1,179	12	1,625
Hardin	1,204	13,974	53	616	704	1,065	404	2	.....	401	3	196
Harrison	2,976	21,680	53	1,046	24	1,010	1	82	2	240	3	10
Henry	2,464	34,121	102	2,233	24	1,010	80	31	1	60	3	360
Hocking	2,232	3,979	112	1,943	6	88	3	66	.....	.....	14	401
Hocking	1,986	24,346	112	2,460	6	88	3	66	.....	.....	14	401



Holmes	3,547	63,497	63	4,799	1	269	1	25	53	593	11	548
Huron	3,905	79,311	94	6,645	25	335	6	125	3	405	34	2,736
Jackson	2,150	267,150	267	5,544	5	180	1	38	10	.....	23	2,011
Jefferson	3,281	60,151	400	5,447	13	636	39	485	.....	715	63	1,113
Knox	2,972	817	277	11,135	229	14,066	.....	.....	.....	.....	109	3,315
Lake	1,541	115,753	538	3,231	74	600	13	255	53	735	192	6,646
Lakeview	1,892	37,170	139	4,262	25	1,312	2	321	14	331	45	1,970
Licking	3,646	29,997	320	4,262	2	1,312	6	90	23	712	30	444
Logan	1,539	7,127	84	1,074	3	1,306	6	115	45	1,763	183	5,081
Lorain	2,229	94,943	234	7,543	35	2,375	6	2,309	5	1,547	373	12,378
Lucas	1,768	53,752	298	9,994	94	4,751	11	304	5	510	.....	.....
Madison	1,465	6,451	208	4,447	.....	1,172	.....	.....	.....	237	.....	.....
Mahoning	8,553	24,773	109	2,897	84	2,677	1	64	28	566	69	5,481
Marion	1,132	15,299	5	2,263	15	713	1	228	12	137	53	2,441
Medina	2,905	103,532	47	1,872	15	1,138	1	220	12	1,140	36	1,411
Meigs	1,000	27,433	159	2,583	31	415	7	220	12	1,150	142	4,553
Mercer	1,467	10,945	15	1,104	31	52	.....	25	17	185	.....	.....
Miami	1,156	1,792	38	1,146	45	1,725	10	1,867	17	742	52	3,192
Monroe	1,571	35,645	8	1,533	10	7,146	17	1,022	9	730	44	1,380
Montgomery	1,454	5,018	25	3,098	10	1,440	6	783	8	325	134	6,110
Morgan	1,514	14,233	71	4,482	22	1,170	8	80	4	15	158	157
Morrow	1,515	30,231	11	11,325	74	1,653	13	708	25	1,335	.....	5,384
Muskingum	3,883	46,068	425	3,157	9	1,584	7	310	8	275	11	5,195
Noble	3,173	38,621	62	2,157	89	4,695	12	340	117	4,795	38	475
Oak	1,623	27,572	6,384	263,109	.....	1,503	2	2,114	53	1,332	76	2,434
Ottawa	1,351	27,441	11	3,703	63	1,503	45	110	53	1,110	29	2,980
Paulding	2,302	24,665	172	4,746	12	276	6	32	4	28	13	680
Perry	1,686	5,656	13	4,746	12	304	3	122	4	406	18	483
Pickaway	1,906	5,100	229	4,746	12	304	3	122	4	406	18	483
Pike	2,576	10,308	9	2,458	34	714	107	1,062	44	663	27	1,315
Portage	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Preble	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Putnam	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Richland	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Ross	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Sandusky	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Scioto	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Seneca	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Shelby	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Stark	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Summit	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Tuscarawas	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Union	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Van Wert	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Vinton	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Warren	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Washington	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Wayne	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Williams	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Wood	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Wyandot	1,800	4,596	8	2,458	34	714	107	1,062	44	663	27	1,315
Totals	221,232	4,029,423	13,866	646,234	3,394	133,300	1,343	32,603	1,497	54,305	5,372	216,515

## AGRICULTURAL STATISTICS—Continued.

Counties.	Lands Owned in 1908.					Horses.	Cattle.			
	Number of acres culti- vated.	Number of acres pas- ture.	Number of land acres wood.	Number of acres lying waste.	Total number of acres owned.		Beef cattle owned in April, 1909.	Milch cows owned in April, 1909.	All other cat- tle owned in April, 1909.	Total number owned in April, 1909.
Adams.....	83,182	96,379	64,486	22,639	267,743	4,590	107	3,700	4,021	8,728
Allen.....	80,771	82,629	25,280	1,714	199,394	7,159	231	7,644	6,632	13,309
Ashland.....	95,067	87,041	29,436	8,428	219,972	6,832	208	6,835	4,587	11,390
Ashabula.....	127,233	138,790	42,300	3,978	311,304	8,923	110	19,220	6,633	25,863
Athens.....	21,724	130,824	23,810	13,102	189,480	8,012	307	3,049	4,049	7,376
Auglaize.....	117,138	183,623	23,864	2,131	217,166	7,529	1,207	8,376	6,909	15,383
Baldwin.....	46,615	176,464	23,221	11,706	256,986	6,630	280	8,377	7,652	16,360
Brown.....	98,711	129,136	20,146	10,186	258,179	6,097	493	7,789	4,337	10,629
Bufter.....	138,500	64,623	15,166	12,117	230,306	8,569	460	9,190	3,574	13,624
Carroll.....	40,618	90,753	22,104	3,307	199,120	4,063	1,499	6,080	4,113	10,729
Champaign.....	119,061	82,102	15,777	1,477	218,417	9,683	546	6,932	7,359	15,770
Clark.....	109,307	89,301	10,850	1,554	161,082	7,748	896	7,525	6,224	14,734
Clermont.....	90,063	104,765	16,492	13,140	224,450	6,848	179	7,458	2,299	10,036
CClinton.....	113,078	20,689	4,079	2,910	230,810	9,490	1,630	6,639	4,637	11,906
Columbiana.....	75,028	121,686	26,402	7,139	238,256	10,038	190	12,618	8,680	16,397
Coshocton.....	67,554	200,887	44,788	6,253	308,432	6,507	630	6,616	7,079	14,419
Crawford.....	104,080	81,847	31,637	736	218,250	6,735	582	7,441	6,633	13,656
Cuyahoga.....	51,873	66,900	10,696	5,442	133,911	4,996	1,020	7,342	1,187	9,383
Darke.....	224,779	38,573	36,967	7,471	347,680	16,302	188	13,669	7,719	21,476
Defiance.....	96,894	28,269	29,100	6,333	191,337	6,072	473	6,507	3,202	10,282
Delaware.....	68,829	82,141	17,917	1,573	233,619	7,016	619	9,257	6,634	16,410
Erie.....	7,077	144,070%	25,853	7,216	105,312	4,005	91	6,031	1,766	5,887
Fairfield.....	99,392	141,360	29,667	7,817	274,422	9,578	1,131	8,140	9,966	18,367
Fayette.....	54,308	69,867	6,243	319	120,737	2,236	2,665	2,448	8,786	8,988
Franklin.....	99,946	64,890	49,790	5,840	220,466	10,764	784	12,817	8,786	18,496
Fulton.....	94,889	66,839	21,339	2,703	186,879	3,970	303	11,948	3,334	15,585
Gallia.....	57,681	121,307	18,837	21,446	219,571	3,970	167	4,191	4,676	9,033
Geauga.....	68,936	96,036	37,356	1,406	208,723	4,933	147	13,330	4,446	17,923
Greene.....	129,142	21,251	41,598	26,656	218,546	9,023	986	6,960	6,785	13,733
Guernsey.....	70,850	144,960	29,460	2,186	266,435	4,687	644	6,012	4,624	11,884
Hamilton.....	42,315	36,121	4,735	4,494	87,665	3,787	410	5,393	737	6,536
Hancock.....	112,898	92,639	27,227	1,238	223,890	7,872	446	8,469	8,469	18,100
Hardin.....	70,426	60,390	12,637	3,051	145,610	4,586	536	3,994	4,721	8,962
Harrison.....	29,640	20,540	20,540	3,088	199,927	4,350	378	5,252	3,636	9,456
Henry.....	136,961	37,765	24,657	3,492	201,875	7,435	400	8,116	3,249	11,713
Highland.....	89,787	164,521	28,740	5,854	291,286	6,894	848	5,091	7,466	13,395
Hocking.....	23,313	84,665	41,769	7,338	167,130	2,798	448	3,064	4,533	8,035

Holmes .....	8,871	70,898	41,677	11,927	212,301	6,193	594	8,227	5,579	14,400
Huron .....	18,473	79,525	35,535	23,574	286,213	7,154	362	7,417	3,642	11,311
Jackson .....	13,823	108,948	19,360	23,447	180,979	2,702	131	6,347	8,947	9,621
Jefferson .....	73,865	122,773	23,737	12,244	203,669	4,744	661	6,234	8,600	10,386
Knox .....	18,306	113,207	36,010	1,126	260,251	6,540	1,382	8,611	8,658	18,451
Lake .....	82,368	42,369	13,418	6,106	93,240	4,498	1	4,617	1,188	8,459
Lawrence .....	28,072	64,086	28,402	20,623	129,247	2,642	547	3,045	3,997	7,589
Licking .....	32,436	28,567	32,436	2,631	369,613	10,008	1,664	11,631	10,015	22,046
Logan .....	170,005	83,788	18,669	2,189	224,140	8,204	661	7,479	6,236	14,276
Lorain .....	74,351	120,065	20,719	3,252	218,977	6,912	185	3,487	15,698	14,775
Lucas .....	60,532	28,086	7,785	6,369	91,772	4,082	457	6,260	886	7,803
Madison .....	105,214	57,351	6,328	1,666	170,062	9,385	1,456	6,143	10,191	16,793
Manitowish .....	64,347	116,977	22,379	2,534	206,237	6,365	464	11,768	11,768	16,796
Marion .....	79,463	91,113	13,296	1,493	181,354	6,608	1,633	6,608	6,618	12,569
Medina .....	128,443	64,646	27,518	1,918	224,532	7,603	111	10,166	4,401	14,678
Meigs .....	80,314	124,696	21,420	9,696	196,026	3,646	324	3,728	4,800	8,850
Mercer .....	131,783	61,237	34,942	4,086	222,063	7,948	104	7,987	7,692	14,293
Miami .....	160,780	16,173	10,830	8,001	195,710	9,426	218	7,043	5,636	12,822
Monroe .....	110,774	33,526	33,526	20,942	179,663	9,665	405	10,317	8,359	14,061
Montgomery .....	37,462	110,774	17,187	8,666	159,663	6,065	239	6,895	5,832	10,807
Morgan .....	31,446	80,540	28,420	1,800	209,930	6,765	767	6,980	6,085	11,822
Morrow .....	18,545	178,360	85,668	7,394	840,481	6,099	1,318	8,501	8,197	17,371
Muskingum .....	60,889	146,403	20,005	5,236	236,887	4,114	1,109	5,094	7,177	13,480
Noble .....	82,864	26,687	16,718	6,382	108,023	4,680	104	6,112	2,106	7,821
Ottawa .....	102,879	25,330	16,732	2,426	183,166	7,272	251	4,717	1,634	6,437
Paulding .....	85,832	41,948	92,976	29,201	209,907	6,607	627	6,767	7,110	13,106
Perry .....	128,260	83,763	12,940	11,301	246,164	7,346	627	8,797	8,797	14,300
Pickaway .....	46,420	57,173	60,120	15,202	177,916	3,943	325	2,366	3,186	5,886
Portage .....	89,360	116,196	34,238	6,696	247,629	7,817	415	13,877	4,331	13,023
Preble .....	133,520	66,241	25,062	8,177	228,216	10,183	546	8,189	2,642	14,821
Putnam .....	133,336	64,201	25,062	6,696	241,699	7,817	415	7,732	4,638	15,372
Richland .....	127,161	85,909	38,946	3,478	256,394	7,512	1,385	9,654	5,614	15,683
Ross .....	107,076	47,561	16,361	4,268	176,166	6,862	485	6,891	3,373	6,985
Sandusky .....	41,487	45,974	46,706	27,608	163,666	8,663	138	3,474	3,373	6,985
Seneca .....	161,232	91,684	32,953	2,480	286,329	8,819	779	9,698	4,363	14,740
Shelby .....	169,941	26,415	22,223	4,723	214,302	8,226	155	8,168	5,339	13,712
Stark .....	188,964	67,333	24,742	8,370	294,379	11,060	332	16,471	6,711	17,106
Starnut .....	88,629	70,356	16,350	7,499	184,594	7,515	196	17,640	5,629	23,852
Trumbull .....	112,314	141,414	37,730	7,668	299,116	7,663	488	10,710	7,577	17,106
Tuscarawas .....	76,196	158,388	34,966	8,314	276,966	6,869	609	7,994	5,915	14,202
Union .....	82,129	20,263	19,176	646	222,214	7,942	127	6,966	3,827	9,610
Van Wert .....	184,039	27,970	28,408	807	209,223	7,942	127	6,966	3,827	9,610
Vinton .....	83,434	82,820	47,679	47,779	228,712	2,388	201	2,454	3,867	6,522
Warren .....	106,765	82,665	21,245	4,297	216,862	8,229	701	7,673	3,243	11,617
Washington .....	63,404	169,267	46,784	29,328	297,773	6,261	264	6,520	7,666	13,860
Wayne .....	178,004	63,401	58,594	6,712	297,773	10,911	767	13,313	8,041	22,111
Williams .....	128,625	106,946	26,112	1,115	262,797	6,334	563	8,496	4,462	13,620
Wood .....	177,405	72,600	20,160	6,730	276,896	9,788	2,686	9,912	3,612	15,510
Wyandot .....	120,797	59,364	19,338	1,916	201,861	6,709	385	5,760	4,947	11,062
Totals.....	8,156,060	7,839,621	2,365,397	686,705	19,331,937	589,890	50,324	669,643	441,796	1,151,694

## AGRICULTURAL STATISTICS—Continued.

Counties.	Sheep.				Hogs.		Wool. Pounds shorn, 1908.
	Number owned April, 1909.	Killed by dogs 1908.	Value, 1908.	Injured by dogs 1908.	Value, 1908.	Total number owned in April, 1909.	For summer markets, 1909.
Adams .....	5,527	315	976	106	303	6,869	1,475
Allen .....	18,571	127	683	186	623	21,139	6,293
Ashtabula .....	34,527	181	770	89	254	11,531	2,937
Athens .....	7,782	173	973	76	291	3,098	590
Auglaize .....	42,006	276	920	66	248	1,418	46,443
Belmont .....	8,332	66	376	49	147	22,238	19
Brown .....	72,316	647	1,351	533	601	6,491	9,707
Brown .....	7,806	235	1,230	113	827	15,463	293
Butler .....	7,927	113	1,680	74	466	20,541	3,542
Carroll .....	59,071	234	1,030	85	181	6,765	88,014
Champaign .....	21,333	113	611	85	118	28,989	45,769
Clark .....	21,201	86	410	126	113	22,723	37,619
Clermont .....	3,957	142	340	42	115	8,790	116,163
Clinton .....	17,348	821	340	69	227	41,095	107,852
Columbiana .....	24,676	191	653	141	277	8,559	17,211
Coshocton .....	96,525	300	1,193	201	316	1,920	109,397
Crawford .....	44,351	62	703	119	477	8,559	145,663
Cuyahoga .....	3,230	164	818	108	264	18,337	700,125
Darke .....	6,174	.....	833	108	453	9,675	305,598
Defiance .....	14,472	176	998	32	272	35,078	21,505
Delaware .....	47,888	85	277	10	208	7,960	23,123
Erie .....	10,453	83	277	57	46	9,137	114,121
Fairfield .....	17,200	207	840	63	204	14,711	244,419
Fayette .....	7,869	8	114	21	736	4,514	92,248
Franklin .....	9,183	73	304	66	145	25,223	62,917
Fulton .....	12,101	107	679	75	85	24,750	29,637
Gallia .....	14,922	184	860	56	132	14,944	41,779
Geauga .....	4,894	106	579	46	115	12,264	66,038
Greene .....	19,632	177	929	43	156	3,467	68,767
Guernsey .....	68,441	233	1,285	45	139	29,338	24,874
Hamilton .....	35,220	162	214	109	195	3,455	122,506
Hancock .....	25,303	103	613	10	62	4,132	466,040
Hardin .....	107,515	57	409	94	159	3,467	7,770
Harmon .....	17,515	102	222	103	139	30,765	210,875
Henry .....	17,515	90	476	28	42	37,886	109,030
Highland .....	15,386	125	461	30	177	3,915	682,163
Hocking .....	15,386	125	461	79	343	11,529	37,585
Hocking .....	15,386	125	461	85	170	28,709	80,981
Hocking .....	15,386	125	461	85	170	4,125	89,847

	12,724	7,176	29,883	1,233,044	279,604	13,752,000
<b>Totals</b>	<b>12,724</b>	<b>7,176</b>	<b>29,883</b>	<b>1,233,044</b>	<b>279,604</b>	<b>13,752,000</b>
Helmer	24,693				2,966	160,736
Huron	53,967	126	339	101	2,718	434,177
Jackson	3,463	60	5	5	14,420	14,420
Jefferson	43,627	213	213	213	147	290,339
Jones	92,268	416	791	824	7,800	576,111
Knox	8,753	134	1,443	120	22,081	22,081
Lake	1,256	23	324	63	1,296	4,271
Lawrence	104,390	341	1,383	321	17,937	680,207
Licking	38,362	54	286	103	22,229	216,316
Logan	13,638	103	503	124	4,246	93,427
Lorain	1,634	26	206	67	6,567	8,665
Lucas	18,666	197	788	413	11,371	78,214
Madison	17,911	143	1,363	80	6,151	116,129
Marion	43,376	174	709	100	24,408	297,719
Marion	19,030	248	780	286	15,755	132,266
Medina	22,747	173	640	122	1,663	163,942
Melzer	9,632	67	571	97	23,383	42,722
Merger	20,864	57	283	69	1,691	7,601
Miami	34,016	37	230	5	4,297	70,236
Monroe	3,029	96	712	174	1,518	70,236
Montgomery	72,707	134	646	164	1,618	517,348
Morgan	65,405	170	1,441	164	2,454	477,845
Morgan	90,823	236	1,117	289	7,466	640,357
Muskingum	64,469	231	1,059	534	8,414	415,445
Noble	5,543	11	55	34	1,688	31,900
Ottawa	10,047	136	787	265	8,520	54,714
Pauding	31,816	188	726	413	2,352	196,483
Perry	8,923	63	1,256	30	6,024	32,601
Pickaway	4,443	94	453	39	2,348	16,353
Pike	14,511	58	862	406	5,607	101,511
Portage	6,149	91	697	139	29,843	24,434
Portage	10,833	66	310	123	21,513	24,434
Portage	42,888	176	692	109	13,949	263,911
Richland	16,918	78	494	86	67,070	38,251
Russ	12,526	160	1,006	233	16,151	72,308
Sandusky	781	19	112	56	4,173	1,941
Santo	38,382	134	1,070	367	29,140	263,501
Schober	5,628	81	580	194	16,471	27,806
Shelby	16,047	166	1,167	177	15,698	87,173
Shelby	4,502	59	256	137	6,987	26,333
Summit	12,468	214	1,125	497	3,946	79,310
Trumbull	30,648	312	212	322	8,462	167,041
Tuscarawas	38,205	146	191	894	27,418	225,197
Union	356	356	1,701	151	7,465	69,405
Van Wert	10,140	90	608	161	16,797	69,405
Vinton	20,172	113	824	43	2,076	105,685
Warren	6,824	109	323	206	13,075	33,317
Washington	22,062	139	570	67	3,338	218,368
Wayne	18,353	126	708	136	19,214	108,090
Williams	20,628	65	248	39	11,226	140,198
Wood	13,040	127	496	182	25,198	64,566
Wyandot	56,006	122	359	170	23,057	365,974

§—B. of A.

## AGRICULTURAL STATISTICS—Concluded.

Counties.	Domestic Animals Died from Diseases in 1908.					
	Horses.		Cattle.		Sheep.	
	Number.	Value.	Number.	Value.	Number.	Value.
Adams .....	121	7,660	97	2,447	268	1,167
Allen .....	139	14,481	116	2,965	402	1,720
Ashtabula .....	131	12,496	103	2,418	569	2,105
Ashtabula .....	194	14,477	272	9,661	175	684
Athens .....	44	3,150	60	1,532	231	475
Auglaize .....	163	16,216	169	6,289	163	820
Belmont .....	86	7,080	143	3,363	433	1,390
Brown .....	220	15,646	210	5,487	374	1,768
Butler .....	182	16,010	174	4,530	226	1,066
Carroll .....	59	6,410	62	1,710	265	907
Champaign .....	136	15,430	196	3,603	50	333
Clark .....	160	14,506	180	4,390	4,276	22,664
Clermont .....	196	12,570	187	4,667	582	3,181
Clinton .....	218	15,290	129	3,423	401	2,077
Columbiana .....	99	9,103	121	3,674	1,313	6,995
Coshocton .....	149	12,660	130	3,460	130	789
Crawford .....	119	9,990	116	3,024	121	1,234
Cuyahoga .....	142	9,625	153	6,048	142	433
Darke .....	319	27,106	290	6,898	74	366
Dedance .....	122	10,675	114	3,319	166	980
Delaware .....	134	10,775	134	3,973	381	2,020
Erie .....	662	7,069	84	3,254	742	2,627
Fairfield .....	236	17,628	212	5,269	366	696
Fayette .....	101	8,836	113	3,650	3,130	14,860
Franklin .....	259	18,667	291	1,506	869	5,310
Fulton .....	176	20,385	181	6,185	3,183	9,152
Gallia .....	110	7,783	129	2,429	3,833	16,722
Geauga .....	140	10,012	231	9,406	83	553
Greene .....	244	19,815	191	6,183	46	646
Guernsey .....	118	13,760	171	4,644	1,749	8,100
Hamilton .....	164	8,707	127	3,337	86	625
Hancock .....	243	26,409	219	6,607	249	1,186
Hardin .....	55	7,800	90	1,896	634	3,404
Harrison .....	94	6,760	83	1,966	679	2,937
Henry .....	170	18,961	112	3,301	20	157
Highland .....	111	8,445	103	3,154	4,192	20,483
					373	2,412

Hocking	108	7,325	176	2,696	625	1,538	172	941
Holmes	101	12,205	115	2,712	324	1,483	84	702
Huron	149	13,216	177	3,119	509	2,239	158	1,067
Jackson	81	4,163	176	2,763	348	820	90	534
Jefferson	92	7,960	113	3,142	451	1,229	132	801
Knox	90	7,101	68	1,896	63	255	18	356
Lake	99	5,656	29	840	94	339	24	176
Lawrence	80	4,080	148	2,692	79	232	137	911
Licking	215	15,540	151	3,852	1,365	3,929	636	3,123
Logan	167	16,535	129	3,627	639	8,153	780	4,865
Lorain	84	8,210	105	3,675	167	674	251	2,053
Lucas	161	8,925	136	6,035	100	747	56	1,658
Madison	196	19,080	162	4,292	881	1,454	6,966	29,831
Mahoning	148	10,940	148	4,510	901	233	130	1,143
Marion	164	18,461	118	3,417	1,131	3,446	1,736	7,116
Medina	151	12,545	131	6,178	320	1,396	148	1,442
Melers	102	6,516	72	1,639	788	2,130	156	429
Mercer	151	14,835	141	3,818	310	1,994	726	3,669
Miami	184	15,810	127	3,298	137	731	932	6,399
Monroe	115	7,740	177	3,157	245	729	101	798
Montgomery	235	17,945	171	4,838	42	219	894	5,489
Morrow	79	10,825	128	3,067	43	2,419	55	372
Morgan	108	7,960	124	1,563	530	2,280	174	1,081
Muskingum	94	6,825	149	2,683	638	1,553	185	1,136
Noble	88	6,825	149	3,498	1,124	2,674	128	8,220
Ottawa	51	4,315	157	1,410	38	180	187	917
Paulding	316	21,995	96	1,647	394	1,647	952	6,044
Perry	63	4,980	91	3,138	169	580	86	506
Pickaway	144	14,832	120	2,201	205	800	297	4,863
Pike	101	6,725	75	1,840	233	833	124	1,176
Portage	110	8,210	149	6,720	249	990	142	1,244
Preble	186	15,915	207	4,830	231	1,551	234	20,821
Putnam	357	25,413	166	6,025	254	2,295	2,112	10,490
Richland	120	11,110	77	2,215	627	1,252	167	924
Ross	220	14,475	138	3,121	398	1,646	768	4,007
Randusky	104	10,820	80	2,431	151	1,252	876	4,742
Scioto	119	8,484	145	2,878	44	150	194	1,361
Seneca	210	25,225	194	6,115	210	6,700	335	20,113
Shelby	225	19,512	179	4,770	443	1,552	535	2,046
Stark	308	26,446	292	8,556	195	1,685	156	4,073
Summit	173	14,870	149	6,052	341	1,304	96	1,003
Tuscarawas	175	11,842	253	8,620	390	1,054	111	907
Trumbull	118	10,910	145	3,904	341	1,561	163	1,131
Union	106	11,202	99	2,995	406	2,185	4,045	19,765
Van Wert	153	16,765	105	3,414	151	1,400	52	873
Vinton	67	4,715	84	1,717	531	1,400	62	773
Warren	188	13,615	186	6,535	241	1,258	1,839	9,760
Washington	122	8,017	181	2,922	398	1,163	68	477
Wayne	263	31,836	227	6,415	668	2,910	264	1,835
Williams	106	10,880	118	4,489	899	4,443	2,516	14,839
Wood	246	25,080	170	5,805	287	1,404	630	4,522
Wyandot	114	10,010	72	1,852	938	3,208	787	3,551
Totals	13,513	1,111,495	12,411	345,689	37,178	143,595	77,586	414,811

## TABLES OF COMPARATIVE STATISTICS AS COMPILED BY THE SECRETARY OF AGRICULTURE

## COMPARATIVE TABLE SHOWING PRODUCTION OF WHEAT IN OHIO FOR TEN YEARS.

Counties.	Number of Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams	161,956	167,935	195,170	194,193	175,516	148,545	178,584	150,417	126,325	218,156
Allen	296,305	173,196	416,343	366,417	201,866	324,217	524,283	473,816	49,611	560,722
Ashtabula	421,808	474,927	565,037	396,849	269,606	626,045	634,061	336,185	199,992	692,971
Ashland	88,817	98,012	108,717	105,991	18,482	131,823	154,276	127,544	51,354	241,819
Athens	62,846	69,089	89,590	94,125	86,082	83,066	87,075	108,126	123,315	151,795
Auglaize	472,434	298,701	735,251	623,108	327,561	487,961	882,655	697,791	775,310	775,151
Belmont	147,566	158,752	247,259	193,872	124,515	274,261	239,477	237,777	174,399	274,694
Brown	140,048	293,315	215,128	214,685	153,472	149,303	173,585	116,367	130,316	209,818
Butler	791,173	981,496	1,147,119	923,667	664,191	707,537	1,034,106	813,416	237,830	108,176
Carroll	189,063	177,942	114,713	169,941	121,664	198,306	204,374	183,182	30,854	207,543
Champaign	369,063	525,165	513,719	382,283	150,371	468,138	621,121	523,919	44,097	783,543
Clark	302,417	501,419	512,098	464,266	275,020	399,553	637,703	422,764	64,618	806,942
Clermont	190,184	219,311	218,129	153,973	56,641	100,295	113,866	117,341	74,808	132,949
Cleves	541,254	802,370	719,119	644,804	469,514	469,667	526,598	348,227	33,630	687,147
Columbiana	339,708	315,576	393,297	299,683	264,923	360,164	347,311	463,690	216,112	320,630
Coshocton	280,225	311,704	300,645	281,275	148,284	303,461	353,663	226,829	68,067	338,998
Crawford	433,517	592,313	630,645	637,429	390,777	401,127	499,291	364,681	144,479	660,523
Cuyahoga	125,675	160,613	100,613	155,941	89,477	141,496	199,346	212,816	72,019	202,621
Darke	836,888	691,013	1,217,296	940,446	336,161	816,840	1,253,069	1,180,245	1,351,096	1,351,096
Defiance	260,917	391,748	313,761	174,806	150,961	218,495	369,932	197,867	207,468	207,468
Delaware	187,465	256,160	260,725	223,417	156,652	124,867	136,167	131,696	60,537	479,210
Eric	278,961	365,825	353,825	299,347	178,772	327,747	347,229	265,323	61,513	388,468
Fairfield	477,468	698,114	773,091	698,433	606,372	585,493	591,968	399,579	8,296	677,034
Fayette	332,519	471,489	660,252	517,428	392,219	426,866	611,380	442,129	20,516	968,176
Franklin	37,731	419,283	435,088	416,764	416,764	346,856	463,293	409,986	64,561	716,942
Fulton	260,925	260,026	254,696	125,859	125,859	173,607	204,034	289,448	149,010	82,831
Gallia	114,131	165,584	141,496	110,834	98,537	116,478	96,019	131,520	199,466	216,132
Geauga	89,463	59,372	85,466	107,843	39,693	115,501	120,182	98,753	32,643	173,756
Greene	581,677	721,592	800,772	608,370	357,349	693,092	859,786	649,071	86,913	860,817
Guernsey	107,020	146,028	180,818	142,163	97,442	143,339	146,679	166,050	67,469	206,903
Hamilton	207,102	260,762	296,276	237,689	140,508	426,715	466,168	238,394	114,346	294,745
Hancock	464,991	636,096	776,215	626,210	298,699	609,804	697,477	776,659	88,563	946,112
Hardin	137,617	228,464	301,897	126,369	132,468	303,904	469,507	498,913	76,598	620,912
Harrison	120,480	163,948	163,943	126,369	62,962	161,842	196,065	157,162	70,144	159,877
Henry	427,279	404,236	466,149	369,942	146,945	336,378	372,963	475,426	340,478	207,346
Highland	377,514	512,446	566,981	571,171	440,412	223,171	602,026	250,277	20,649	413,624
Hocking	96,797	121,113	142,252	113,165	123,171	123,171	112,233	79,579	33,972	158,223
Holmes	410,273	460,353	425,295	306,785	227,257	466,296	499,892	360,498	210,686	467,884
Huron	632,245	597,516	816,664	626,893	296,487	556,545	667,678	562,045	76,904	781,204
Jackson	97,911	71,613	78,566	60,787	50,620	67,904	50,162	64,236	85,556	134,424



Jefferson	149,426	150,790	189,302	148,687	88,091	183,173	216,497	179,125	117,194	177,028
Knox	430,738	420,401	422,070	420,960	419,860	429,047	326,189	219,389	208,751	626,682
Lake	54,011	57,133	68,415	64,219	20,186	63,627	64,341	46,683	14,774	100,367
Lawrence	32,168	27,912	31,847	32,614	27,223	33,472	35,903	70,037	73,666	101,183
Lebanon	292,140	218,063	591,212	393,717	334,272	442,639	319,634	223,336	92,001	616,650
Logan	297,999	218,513	48,978	294,837	99,140	372,444	609,776	600,450	46,119	739,302
Lorain	386,093	341,227	491,272	404,248	258,228	356,840	408,819	336,170	100,296	402,773
Lucas	136,797	194,632	141,287	158,984	63,864	122,701	193,038	204,711	160,815	46,545
Madison	314,356	389,029	247,978	151,838	108,951	136,341	193,038	302,144	38,197	891,327
Mahoning	254,296	227,187	297,995	397,948	184,228	274,480	266,104	246,291	131,987	231,788
Marion	215,671	322,702	341,635	279,520	222,624	222,566	380,462	244,409	94,822	646,021
Medina	499,040	431,249	435,684	453,328	308,927	383,896	430,984	398,232	135,949	311,808
Melgs	121,151	140,929	104,145	137,140	119,100	130,563	125,041	133,353	83,949	220,482
Mercer	4,337	224,517	857,215	606,498	417,666	450,140	565,285	585,153	9,029	766,355
Miami	640,810	533,859	962,934	748,865	406,388	619,491	967,574	747,089	87,789	87,789
Monroe	103,847	171,867	198,024	167,928	138,499	118,074	184,316	125,686	133,308	239,907
Montgomery	544,311	699,476	788,461	701,389	318,074	616,037	906,662	613,874	116,630	859,853
Morgan	19,553	143,585	181,295	179,101	160,337	141,511	112,575	111,574	111,445	234,544
Morrow	278,446	206,614	99,521	276,135	207,837	276,293	218,659	118,317	112,108	434,265
Muskingum	218,295	222,681	289,334	285,024	285,024	283,998	288,752	373,727	102,953	397,125
Noble	89,295	141,680	171,367	155,507	106,083	154,181	134,798	136,422	106,284	164,328
Ottawa	176,613	93,361	300,698	220,048	122,532	153,295	241,148	282,997	121,325	184,661
Paulding	161,710	156,625	313,769	201,098	104,068	153,295	241,148	282,997	354,369	74,689
Perry	9,725	227,834	278,434	212,817	317,231	181,779	183,569	136,070	33,073	255,150
Pickaway	128,001	173,818	198,010	141,705	79,031	634,030	885,057	685,119	114,004	994,295
Pike	167,150	173,818	198,010	141,705	79,031	634,030	885,057	685,119	114,004	994,295
Portage	214,956	313,778	311,265	337,880	239,819	348,717	362,178	303,759	19,354	957,659
Pottsville	781,004	80,190	1,075,414	766,960	327,397	531,004	1,001,637	649,560	1,647	957,659
Putnam	456,480	417,815	831,022	590,716	190,355	635,143	696,675	681,576	300,350	879,735
Richland	520,378	681,595	673,541	681,504	367,954	607,350	553,369	471,923	291,532	690,417
Ross	629,630	793,879	763,752	661,366	651,973	462,792	572,107	464,629	132,849	634,346
Sandusky	547,572	535,278	739,977	619,199	259,239	449,798	645,273	533,444	71,472	1,188,685
Schoon	163,401	191,007	218,808	164,486	164,800	130,238	147,060	193,683	244,817	1,246,666
Seneca	914,314	1,056,668	1,266,649	964,433	647,820	723,383	1,052,977	839,966	83,506	1,093,366
Shelby	503,032	297,797	581,536	494,576	249,990	450,296	805,983	646,641	6,407	713,427
Stark	888,285	781,090	911,139	753,267	601,387	891,259	978,880	784,088	571,534	775,863
Summit	421,279	284,244	484,111	430,401	274,878	427,288	488,085	404,454	535,302	535,302
Trembly	139,477	151,151	192,472	161,527	70,359	297,699	188,209	180,176	304,516	174,151
Tuscarawas	351,440	362,781	433,473	366,607	190,883	408,564	417,197	246,283	63,053	374,922
Union	114,844	211,276	291,783	189,160	166,324	170,175	230,449	278,934	45,962	526,909
Van Wert	208,181	190,274	537,134	414,017	278,222	322,420	471,458	43,295	299,572	534,494
Vinton	42,436	52,552	55,295	48,029	40,636	53,961	58,714	53,520	50,462	101,428
Warren	381,282	536,252	613,114	444,363	304,932	358,534	446,059	332,929	54,288	456,332
Washington	165,987	295,164	295,570	290,031	219,297	251,281	231,023	196,019	244,163	411,392
Wayne	603,076	875,680	1,041,255	751,656	629,155	900,144	975,362	708,096	505,707	789,228
Williams	218,027	275,520	295,451	312,658	187,000	231,349	291,612	291,612	67,637	291,170
Wood	474,297	429,430	578,224	502,469	157,958	463,867	562,169	621,036	321,006	507,992
Wyandot	378,217	514,649	568,010	419,027	279,306	335,328	391,401	386,399	88,322	607,221
Total product	28,465,496	30,918,367	39,279,680	32,462,786	21,060,222	29,074,367	36,901,212	31,150,373	10,866,155	41,469,703
Total area	1,822,639	2,009,731	2,022,784	1,878,197	1,720,623	1,981,573	2,064,588	2,176,723	2,468,280	2,967,616

Average area for 10 years, 2,109,775 acres.  
Average product for 10 years, 30,116,835 bushels.

COMPARATIVE TABLE SHOWING PRODUCTION OF BARLEY IN OHIO FOR TEN YEARS.

Counties.	Number of Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....	15,412	12,270	4,466	5,607	5,635	4,237	14,139	200	17,937	1,742
Allen .....	521	706	723	538	1,216	2,651	3,317	14,391	3,582	3,758
Ashtabula .....	448	431	233	570	575	636	1,283	764	2,037	3,720
Athens .....	256	.....	.....	.....	336	.....	.....	.....	.....	.....
Auglaize .....	1,569	3,054	200	1,107	1,120	512	3,527	6,517	8,277	2,919
Belmont .....	324	185	18,055	380	156	78	431	509	472	542
Brown .....	.....	.....	900	11,335	80	20	2	72	36	36
Bryan .....	16,815	11,820	11,890	.....	26,124	35,198	56,519	33,399	8,696	25,967
Butler .....	110	100	280	4,363	1,800	45	.....	51	10,153	3,841
Carroll .....	110	4,391	430	.....	.....	2,080	1,394	5,859	10,153	3,841
Champaign .....	1,180	1,123	1,060	3,675	2,520	690	2,121	2,672	2,868	2,399
Clark .....	.....	.....	.....	753	.....	8	.....	20	.....	.....
Clermont .....	15	45	2,330	2,277	513	99	3,155	1,910	681	1,390
Columbiana .....	.....	40	30	65	60	65	265	242	420	456
Coshocton .....	130	14	30	.....	84	113	453	1,437	884	662
Crawford .....	1,971	1,600	1,346	1,481	823	1,914	3,344	3,261	2,434	2,443
Cuyahoga .....	1,105	910	50	1,498	140	282	658	297	1,198	7,621
Darke .....	760	1,323	1,553	1,836	2,430	2,516	5,320	11,936	21,790	42,213
Delaware .....	19,577	20,472	17,480	31,684	48,274	62,472	.....	48,737	43,279	42,213
Delaware .....	28	317	185	380	.....	.....	292	1,502	1,106	1,240
Erie .....	4,497	5,631	3,900	4,220	8,190	6,566	10,674	11,549	9,878	7,768
Fairfield .....	130	548	35	431	.....	1,335	1,650	1,534	1,059	1,277
Fayette .....	.....	.....	405	976	260	140	1,046	7,903	2,785	1,969
Franklin .....	170	1,200	.....	.....	380	340	187	1,067	1,008	71
Fulton .....	35,674	45,444	34,961	38,523	33,319	29,123	82,189	14,146	34,293	29,568
Galla .....	.....	.....	60	20	.....	.....	.....	25	7	.....
Geauga .....	130	818	761	511	150	160	768	850	892	567
Greene .....	375	4,085	890	768	130	96	1,203	1,236	2,219	772
Guernsey .....	236	311	155	125	98	76	225	32	15	230
Hamilton .....	1,430	760	1,022	385	2,394	4,820	6,167	3,331	1,856	6,627
Hancock .....	7,647	7,978	3,351	10,228	4,537	4,390	16,385	34,961	43,814	12,156
Hardin .....	2,195	740	385	1,714	1,140	1,414	5,254	7,395	2,829	4,688
Harrison .....	175	205	280	207	60	.....	.....	47	724	1,066
Henry .....	57,004	65,215	83,138	94,730	165,424	88,753	127,365	65,137	95,467	91,119
Highland .....	.....	1,100	440	1,137	1,080	500	1,241	823	86,440	380
Hocking .....	25	.....	.....	60	.....	.....	.....	113	.....	.....
Holmes .....	229	962	1,020	1,569	580	1,235	887	1,499	390	342
Huron .....	2,080	.....	.....	.....	.....	.....	3,946	6,721	2,563	4,055
Jackson .....	200	.....	.....	.....	.....	200	.....	18	.....	.....

Jefferson	40	35	238	80	320	290	527	516	652	1,127
Knox	611	1,011	935	875	3,402	1,234	632	1,613	3,610	1,583
Lake	300	580	60	770	516	620	140	412	116	1,148
Lawrence	2,363	3,630	2,474	3,456	1,538	2,538	4,731	8,227	3,777	1,127
Licking	2,293	5,520	2,474	2,694	1,775	1,125	1,641	8,227	1,640	2,246
Logan	4,287	31,560	31,560	26,994	20,192	16,130	19,135	10,100	10,735	14,986
Lorain	905	35,723	1,144	4,112	1,392	800	1,727	8,914	10,746	15,987
Lucas	512	4,140	560	31	1,392	800	1,727	110	182	193
Madison	75	215	1,641	655	560	200	533	648	1,300	197
Manitowish	1,860	1,259	4,930	553	2,048	438	1,447	2,064	5,746	4,100
Marion	9,081	9,962	4,930	20	24	38,204	60	28	19	12
Meigs	19	300	1,200	13,588	23,046	15,439	37,330	25,180	25,180	10,337
Mercer	1,385	976	1,119	1,698	32	100	420	2,573	6,102	2,277
Monroe	25	3	184	100	48	1,670	3,120	4,722	581	3,741
Montgomery	80	37,407	37,407	220	120	101	576	1,052	121	83
Morgan	31,933	37,407	37,407	220	120	101	576	1,052	121	83
Morrow	9,458	9,124	80	76	157,108	52,457	57,332	55,881	31,845	20,766
Muskingum	56	40	400	316	376	190	333	1,940	5,232	135
Noble	40	100	461	316	376	190	333	1,940	5,232	135
Ottawa	149	182	400	230	378	436	157	101	2,100	50
Paulding	262	1,907	25,488	1,430	551	277	1,840	1,953	860	1,235
Perry	31,982	40,348	1,052	46,806	69,300	52,639	92,642	76,374	115,796	38,733
Pickaway	1,210	1,446	190	840	1,472	2,164	4,976	4,720	3,469	3,831
Pike	7,896	375	5,683	657	468	20	1,190	2,210	691	20
Portage	3,874	4,970	2,208	2,131	10,180	7,904	9,257	7,783	12,176	2,932
Preble	350	954	80	1,558	6,048	1,353	4,724	13,015	31,047	42
Putnam	47	81	1,771	370	2,400	24	1,374	2,401	2,532	3,789
Richland	1,093	1,277	550	282	462	199	361	1,582	1,475	728
Ross	200	21	135	1,725	713	840	781	321	293	206
Sandusky	328	1,708	28	76	1,000	128	432	50	296	36
Seneca	33,140	41,155	587	1,646	770	600	1,181	8,878	9,706	577
Shelby	1,010	6,260	2,350	50,613	88,780	123,249	241,963	210,156	194,011	76,855
Stark	519	320	725	1,350	3,438	10,015	17,287	12,456	7,822	8,126
Summit	33,900	36,634	53,549	627	484	1,080	1,651	1,641	3,232	5
Tuscarawas	34,413	32,825	18,208	38,712	68,100	40,535	143,919	143,919	65,597	68,936
Union	411	1,260	1,260	564	6,525	81,891	114,428	169,092	126,214	78,639
Vinton	432,894	476,236	443,751	552,991	976,192	813,651	1,351,945	1,356,123	1,224,198	762,638
Warren	19,704	18,317	14,659	23,177	85,398	38,817	45,776	54,428	41,989	26,694
Washington										
Wayne										
Williams										
Wood										
Wyandot										
Total product										
Total area										

Average area for 10 years, 33,990 acres.  
Average product for 10 years, 887,825 bushels.



Lake .....	11,082	11,185	9,517	17,573	7,428	9,155	13,373	18,061	7,951	6,204
Lawrence .....	71	122	308	211	604	205	147	418	319	70
Leking .....	12,879	8,133	12,024	16,180	26,194	18,433	44,201	34,956	5,262	4,159
Logan .....	26,146	21,518	30,815	24,904	10,055	11,035	20,789	24,548	4,770	2,109
Loren .....	7,010	7,907	7,394	7,971	3,132	3,235	2,845	9,785	1,146	381
Lucas .....	18,571	24,357	25,610	24,068	8,994	9,748	15,188	30,349	15,453	5,122
Madison .....	3,411	6,832	4,581	12,098	7,225	7,916	15,188	32,431	3,890	1,906
Mahoning .....	3,411	6,832	4,581	12,098	7,225	7,916	15,188	32,431	1,577	1,134
Marion .....	6,706	3,317	2,453	13,179	2,792	3,154	4,351	8,133	9,819	3,076
Medina .....	1,750	3,679	3,113	1,983	8,977	4,401	8,634	21,302	3,807	3,415
Medina .....	13,913	9,279	9,813	17,908	8,410	10,952	18,799	21,302	940	449
Meigs .....	567	227	303	2,220	2,440	1,925	2,215	2,258	2,353	1,142
Mercer .....	12,487	6,731	6,434	6,127	4,028	1,896	2,215	17,155	2,207	2,020
Miami .....	1,901	1,866	1,718	4,416	906	635	1,561	4,616	996	404
Monroe .....	1,355	2,121	1,619	2,160	2,037	2,847	6,719	2,258	2,436	4,033
Montgomery .....	4,549	4,916	4,871	9,116	3,762	1,836	10,972	3,353	3,807	1,939
Morgan .....	468	415	1,331	1,669	1,747	1,536	1,408	8,868	354	1,866
Morrow .....	5,133	7,462	3,738	6,685	2,776	6,808	22,222	6,810	1,847	1,966
Muskingum .....	2,556	7,463	2,535	6,231	6,368	6,043	12,960	19,244	4,459	1,596
Noble .....	333	608	625	1,982	1,296	1,296	1,361	1,465	610	310
Ottawa .....	8,338	9,825	10,300	7,363	1,820	2,290	9,474	27,273	6,239	1,743
Paulding .....	24,640	25,759	48,352	31,006	84,277	9,902	30,001	56,719	23,642	4,208
Perry .....	1,981	1,710	861	2,083	4,408	2,487	5,454	14,580	1,010	506
Pickaway .....	3,310	1,978	2,040	6,709	6,834	1,984	7,156	20,205	6,842	191
Pike .....	686	340	665	1,103	2,837	1,582	3,620	4,976	1,765	337
Portage .....	4,248	2,479	3,161	9,825	3,087	5,241	8,763	8,065	2,032	1,147
Preble .....	3,278	4,360	5,230	9,312	13,435	465	2,104	15,525	1,446	1,074
Putnam .....	20,306	13,808	19,629	16,162	13,435	11,740	33,324	62,281	12,176	4,722
Richland .....	4,714	4,149	3,917	6,831	3,871	5,387	11,945	10,137	3,918	2,733
Ross .....	3,215	2,376	1,224	5,940	4,904	2,673	6,916	9,687	1,936	943
Sandusky .....	8,605	8,979	5,057	6,717	3,038	2,592	13,056	31,449	4,959	2,145
Scioto .....	1,877	697	454	433	836	483	1,052	601	138	139
Seneca .....	2,207	2,606	3,432	3,900	1,205	815	4,840	16,466	2,644	811
Shelby .....	4,069	5,833	1,855	2,252	1,335	690	5,704	46,400	3,925	3,925
Stark .....	3,892	3,597	3,879	3,915	3,313	3,318	6,009	6,133	3,560	822
Summit .....	3,562	2,477	5,891	6,473	2,125	4,594	6,546	7,169	1,538	1,590
Tuscarawas .....	6,346	6,885	3,471	6,740	1,944	3,414	5,855	6,239	1,851	1,207
Tuscarawas .....	3,616	3,900	3,758	2,709	1,523	2,067	9,811	16,673	2,327	1,027
Union .....	18,155	23,306	14,545	15,644	14,848	9,067	15,385	9,692	1,659	1,596
Van Wert .....	40,598	29,255	37,624	24,914	9,719	10,398	23,086	56,521	17,292	3,892
Vinton .....	12	211	80	1,490	1,490	1,308	2,103	9,047	5,671	1,454
Warren .....	7,237	5,516	7,919	15,753	9,198	3,718	12,592	20,765	5,462	2,273
Washington .....	172	1,234	1,636	1,912	1,912	1,480	1,453	7,965	1,861	494
Wayne .....	3,689	5,083	5,212	6,553	3,554	5,241	1,221	9,979	3,274	688
Williams .....	4,556	10,939	7,823	11,043	4,839	3,157	13,189	13,746	3,238	3,238
Wood .....	9,887	11,935	15,884	16,171	3,633	6,401	15,277	62,579	13,018	3,624
Wyandot .....	3,243	1,976	560	5,187	1,179	1,454	3,872	8,266	2,179	1,352
Total product .....	613,571	571,858	586,269	813,532	550,924	416,736	987,553	1,666,493	435,254	185,710
Total area .....	52,395	42,087	41,367	60,400	42,996	41,180	73,066	129,414	34,283	15,359

Average product for 10 years, 676,700 bushels.  
Average area for 10 years, 63,252 acres.

COMPARATIVE TABLE SHOWING PRODUCTION OF OATS IN OHIO FOR TEN YEARS.

Counties.	Number of Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams	4,378	25,434	48,438	78,242	81,223	59,534	94,721	84,665	37,684	17,929
Allen	481,200	630,612	630,612	678,986	605,147	302,810	432,052	397,914	584,914	251,511
Ashtabula	667,529	457,637	633,377	738,244	713,459	665,682	771,263	690,131	627,475	639,553
Ashland	697,206	534,519	634,372	873,544	592,694	860,065	872,233	690,349	866,924	794,959
Athens	8,000	17,510	36,488	50,498	47,650	22,175	38,504	24,477	27,310	24,862
Auglaize	580,093	872,278	702,172	783,208	961,693	471,395	666,275	538,610	847,811	350,986
Baldwin	163,319	17,153	916,483	298,008	321,985	192,775	264,582	192,815	201,014	17,838
Brown	3,434	58,120	81,243	186,690	211,817	133,557	227,823	176,119	131,018	107,276
Butler	328,356	11,840	214,672	364,546	377,936	329,774	373,694	231,571	432,839	110,890
Carrick	174,683	684,116	313,717	380,923	373,558	331,410	371,066	323,903	470,137	441,821
Champaign	174,683	298,624	313,717	1,158,363	1,388,138	902,733	747,141	357,408	788,170	168,204
Clark	26,366	90,702	343,454	439,513	733,043	302,831	433,413	243,432	447,183	136,621
Clermont	22,219	70,851	178,151	307,063	347,474	175,627	322,620	209,864	197,380	128,181
Columbiana	531,572	469,226	600,678	946,973	877,170	121,369	366,069	167,546	282,554	49,114
Coshocton	222,740	314,496	274,720	326,836	563,103	621,583	654,130	477,506	741,394	683,071
Crawford	738,767	602,270	888,707	930,760	412,653	247,734	299,783	276,456	280,434	251,767
Cuyahoga	464,207	349,409	433,756	690,053	1,096,031	826,228	1,076,557	799,150	584,538	642,896
Darke	653,158	1,072,031	1,170,064	1,624,443	1,338,936	608,013	1,631,881	531,592	746,344	957,135
Delaware	560,423	206,276	419,383	438,407	467,325	650,324	916,847	658,932	154,970	470,377
Erle	32,135	51,545	106,899	150,403	241,781	157,227	216,661	479,250	564,030	473,071
Fairfield	129,674	51,669	220,020	448,747	683,540	98,763	171,766	124,904	193,449	85,406
Franklin	702,481	189,756	4,910,013	582,719	690,448	421,819	645,233	347,498	439,224	276,929
Fulton	10,151	657,896	1,014,986	966,272	1,137,696	868,426	1,121,673	778,510	981,196	1,131,937
Gallia	506,539	378,580	36,980	68,039	421,081	38,132	48,793	34,583	24,997	13,971
Geauga	86,788	109,236	219,224	596,157	421,081	513,068	644,777	419,073	520,673	528,497
Guernsey	15,424	93,893	146,758	401,869	487,668	146,069	296,258	174,856	322,131	76,022
Hamilton	578,129	573,625	67,366	130,763	202,027	118,181	157,827	158,590	140,289	143,307
Hancock	362,519	491,678	663,618	639,079	116,306	177,195	164,941	73,794	105,361	46,943
Hardin	160,114	151,117	206,179	233,409	949,606	418,634	600,466	459,071	632,224	376,222
Harrison	1,652,717	873,051	1,128,410	996,337	1,458,233	161,866	215,798	189,609	183,646	189,021
Henry	13,295	44,466	79,921	170,895	190,146	83,275	156,285	108,162	64,149	71,211
Highland	10,094	20,129	39,355	58,164	64,811	39,393	56,774	44,262	74,744	17,553
Hocking	607,788	420,136	514,683	667,480	1,014,122	572,156	619,269	508,382	587,906	171,119
Holmes	1,120,657	654,622	937,634	1,023,233	1,203,269	936,696	1,126,441	1,160,706	1,180,706	947,353
Huron	267,808	14,500	21,080	38,870	28,638	27,715	30,839	27,960	12,230	4,967
Jackson	329,181	258,248	304,451	338,220	860,573	282,340	351,016	252,292	338,923	336,377
Knox	329,181	318,955	324,212	823,579	323,674	346,006	382,102	346,539	236,810	381,068

Iake.....	204,820	231,049	296,109	316,190	326,526	270,990	236,758	261,904	263,776
Lawrence.....	9,130	61,367	41,428	92,001	67,614	39,139	39,139	42,196	27,198
Licking.....	146,692	260,513	352,637	414,817	492,763	348,527	296,421	267,680	255,039
Logan.....	486,338	698,591	694,455	737,048	1,181,888	402,906	310,092	645,000	176,908
Lorain.....	809,693	459,621	832,490	836,329	813,949	825,596	731,616	854,768	806,837
Lucas.....	497,090	428,943	593,821	689,481	633,689	508,044	439,543	624,946	641,068
Madison.....	307,111	626,540	823,710	913,717	1,411,398	776,239	481,119	494,668	191,784
Mahoning.....	474,232	663,849	742,282	663,849	1,688,389	602,462	415,711	728,821	689,760
Marion.....	872,279	642,569	872,279	809,635	1,267,783	916,469	567,606	784,017	496,708
Medina.....	801,946	632,013	764,072	832,527	829,508	976,536	768,274	867,890	833,886
Melms.....	12,475	29,367	18,855	60,328	61,965	36,567	64,241	36,015	20,364
Mercer.....	792,912	1,176,912	1,186,062	1,186,062	1,164,130	659,469	747,896	1,330,242	680,836
Miami.....	380,561	613,006	851,702	1,147,720	1,261,234	602,547	628,294	954,128	389,129
Monroe.....	74,618	146,978	146,978	184,027	186,766	139,024	129,611	129,324	111,645
Montgomery.....	141,655	215,885	387,260	727,766	810,016	286,064	390,074	548,282	247,374
Morgan.....	17,768	33,242	63,915	79,847	106,383	55,393	68,807	53,367	37,280
Morrow.....	332,752	300,886	537,086	500,254	672,992	380,865	731,101	508,648	577,876
Muskingum.....	81,427	103,668	179,774	210,685	266,102	148,818	172,403	158,423	112,928
Noble.....	27,140	34,372	72,331	99,168	108,506	64,919	83,075	62,461	49,463
Ottawa.....	458,174	521,246	582,246	432,195	483,961	421,276	372,055	338,945	123,448
Paulding.....	1,457,100	1,124,657	1,610,414	1,006,860	1,231,422	776,817	970,446	593,142	882,971
Perry.....	37,182	82,048	63,286	68,388	96,994	66,564	66,420	46,010	20,970
Pickaway.....	17,865	98,976	145,018	233,322	320,083	66,498	89,703	141,386	15,111
Pike.....	9,004	35,414	60,482	93,948	98,207	54,473	47,613	20,672	6,503
Portage.....	804,770	429,076	638,231	760,382	638,278	793,471	876,090	679,305	769,979
Preble.....	74,513	172,291	245,392	519,980	670,390	267,369	324,380	718,099	181,531
Putnam.....	630,939	712,332	720,413	798,404	1,029,373	407,647	523,556	678,788	241,478
Richland.....	745,776	576,229	869,834	821,616	1,144,392	708,134	816,646	789,618	837,789
Ross.....	12,982	32,213	55,491	68,301	114,847	43,009	47,361	36,242	7,708
Sandusky.....	87,798	717,663	878,363	924,206	1,127,573	706,800	913,543	1,098,097	689,622
Seneca.....	9,119	39,256	61,660	90,653	94,334	47,860	81,110	68,020	30,801
Shelby.....	803,480	691,148	865,715	1,013,072	1,332,190	787,287	908,007	1,013,149	624,614
Stark.....	1,016,566	1,036,200	984,327	1,074,425	1,348,198	734,809	771,942	1,460,241	600,374
Summit.....	583,609	789,260	1,079,919	1,220,638	1,261,166	1,092,962	1,377,799	1,178,203	1,121,068
Tribune.....	360,619	375,711	518,387	761,642	639,708	672,890	743,263	668,969	716,708
Tuscarawas.....	403,584	488,915	521,695	734,490	647,910	783,715	846,867	896,827	748,819
Union.....	308,095	380,646	591,349	686,740	940,694	472,234	672,316	692,907	668,044
Van Wert.....	966,516	1,017,966	1,010,954	974,281	1,093,015	631,370	640,240	398,126	229,269
Vinton.....	4,723	14,965	29,441	34,649	37,190	27,902	31,602	644,468	632,608
Warren.....	75,392	111,232	225,157	401,353	404,663	204,297	246,340	276,215	9,477
Washington.....	51,036	92,153	161,634	194,788	170,838	122,943	186,861	145,566	115,701
Wayne.....	1,046,805	762,754	1,115,355	1,325,469	1,349,213	1,244,396	1,010,425	1,092,946	1,123,961
Williams.....	577,651	582,812	851,449	839,648	1,048,271	796,137	786,419	951,218	933,170
Wood.....	1,892,486	1,610,946	1,932,486	1,679,132	2,289,932	1,318,453	1,174,448	1,486,386	1,404,129
Wyandot.....	447,692	463,830	567,307	698,909	927,655	465,312	446,181	494,332	389,141
Total product.....	34,363,980	33,906,233	44,179,782	49,731,954	53,312,740	37,305,983	33,936,148	43,193,577	33,296,912
Total area.....	1,281,805	1,429,792	1,344,247	1,449,112	1,467,062	1,213,228	1,063,876	1,251,248	969,666

Average area for 10 years, 1,285,876 acres.  
Average product for 10 years, 41,501,706 bushels.

COMPARATIVE TABLE SHOWING PRODUCTION OF CORN IN OHIO FOR TEN YEARS.

Counties.	Bushels (Shelled).									
	1908.	1907.	1906.	1906.	1904.	1903.	1902.	1901.	1900.	1899.
Adams	854,571	972,105	935,319	799,822	833,485	659,528	908,846	598,677	908,020	902,171
Allen	1,604,028	1,646,806	1,801,810	1,500,787	1,019,187	1,082,426	1,598,880	1,008,652	1,901,497	1,257,240
Ashtabula	893,171	594,816	1,083,702	898,173	653,908	888,728	1,019,692	735,391	1,086,901	836,308
Athens	431,457	159,889	473,994	327,716	61,389	339,353	249,599	611,677	586,148	464,599
Baldwin	335,925	330,690	376,482	353,339	386,926	329,463	483,765	282,080	434,728	454,128
Belmont	2,149,240	1,788,025	2,081,420	1,862,080	1,482,576	1,647,160	1,971,731	1,237,374	2,464,746	1,674,286
Brown	639,836	576,846	839,970	786,293	763,644	674,364	894,340	790,647	921,246	886,204
Butler	1,010,938	1,079,405	1,156,944	1,010,262	1,173,390	966,403	1,284,480	1,118,755	1,214,197	1,214,197
Carroll	448,151	319,051	520,236	452,386	394,649	389,010	459,200	496,543	566,239	381,063
Champaign	2,328,250	2,514,735	2,318,982	2,553,673	2,394,679	2,081,860	2,648,546	1,735,881	3,008,845	2,235,267
Clark	1,888,306	2,082,526	2,013,090	1,930,147	2,196,070	1,418,098	2,361,166	1,631,877	2,716,325	2,035,440
Clermont	682,133	971,255	1,039,568	907,140	776,335	1,186,543	1,064,348	542,678	1,161,680	1,111,813
Clinton	2,212,755	2,718,403	2,736,412	2,723,870	2,375,597	1,443,163	2,692,420	1,646,316	3,275,073	2,555,261
Columbiana	541,895	478,322	753,798	688,569	427,472	655,691	630,413	633,730	729,686	601,318
Coshocton	919,950	735,515	953,098	894,949	882,280	578,336	983,068	780,968	933,213	773,188
Crawford	1,276,118	845,004	1,522,317	1,282,608	1,105,184	1,427,556	1,428,498	1,133,960	1,629,246	1,345,669
Cuyahoga	2,979,679	121,670	314,375	308,136	138,609	310,128	229,453	351,938	429,792	373,953
Darke	2,987,610	3,621,342	4,029,188	3,762,010	3,441,497	3,563,920	4,192,821	2,714,410	5,099,152	3,208,023
DeLaware	1,008,917	763,178	1,533,185	1,143,221	1,312,452	1,114,482	1,193,386	786,277	1,217,657	1,619,353
Delaware	1,325,430	1,627,971	1,568,275	1,169,003	1,141,545	1,397,833	1,718,267	966,765	1,616,187	1,540,143
Erie	688,250	423,758	693,918	560,106	453,398	489,991	548,596	514,501	730,722	649,002
Fairfield	1,908,254	1,961,375	2,594,012	2,017,794	2,089,847	2,100,073	2,041,560	2,279,694	2,105,011	2,199,100
Fayette	1,471,492	1,675,389	2,417,335	2,268,980	2,174,930	1,430,774	2,561,635	2,024,265	3,172,320	2,515,635
Franklin	1,811,794	1,803,178	2,475,590	2,102,845	2,251,999	1,722,803	2,848,567	1,538,557	2,891,623	2,306,290
Fulton	1,499,620	1,365,196	1,717,190	1,121,019	1,377,766	1,353,100	1,307,670	1,227,055	1,436,998	1,264,882
Gallia	476,817	553,974	675,761	515,120	446,887	387,901	573,893	396,802	557,231	640,882
Greage	277,359	131,296	277,600	277,600	49,316	259,773	200,538	324,807	390,379	328,128
Greene	2,216,920	2,588,294	2,404,490	2,540,862	2,391,445	1,723,826	2,736,453	1,775,441	2,756,065	2,754,575
Guernsey	488,275	770,721	683,965	631,619	526,738	358,555	553,114	683,010	543,774	606,624
Hamilton	301,417	680,688	670,961	597,263	548,113	578,555	776,821	403,585	711,558	551,100
Hancock	1,924,847	2,027,160	2,372,581	1,927,987	1,697,571	1,897,965	2,462,238	1,728,807	2,521,203	2,201,211
Hardin	1,309,497	1,302,659	1,741,363	1,373,642	1,162,397	1,186,468	2,049,346	1,420,324	2,133,105	1,565,567
Harrison	454,062	382,850	675,852	419,262	360,309	379,882	511,120	460,768	506,580	419,352
Henry	2,369,482	2,074,333	2,810,346	1,886,748	2,069,519	2,283,869	2,211,553	1,898,418	2,886,462	2,994,498
Highland	1,462,456	1,912,090	1,713,722	1,817,945	1,793,295	1,066,210	2,010,476	1,214,661	1,793,370	1,763,496
Hocking	383,129	356,190	438,469	374,701	359,615	309,966	418,146	307,210	469,461	480,428
Holmes	920,775	761,821	975,687	836,100	733,157	746,862	776,846	776,846	901,928	663,764
Huron	1,077,817	796,397	1,966,722	1,100,079	852,581	977,965	1,034,361	1,012,955	1,846,616	1,966,748
Jackson	321,807	234,089	236,292	281,681	261,861	234,165	331,670	317,238	347,238	287,940
Jefferson	389,697	312,679	461,447	411,826	377,123	467,079	467,079	428,600	469,437	468,069
Knox	521,770	521,650	81,650	81,650	81,650	988,379	1,178,641	1,133,055	1,106,868	1,055,800



Lake Lawrence	202,549	142,733	249,722	177,910	102,975	107,692	126,553	225,459	277,266	238,540
Lake Umbagog	313,016	281,416	310,210	370,910	296,069	244,571	381,178	235,459	277,266	238,540
Litching	1,430,319	1,480,319	1,946,736	1,676,462	1,523,822	1,571,585	1,983,436	1,626,575	1,736,046	1,871,628
Logan	1,796,331	1,896,203	2,287,064	1,833,681	1,766,760	1,444,022	1,973,723	1,223,351	1,421,850	1,763,369
Lorain	597,474	319,250	977,040	723,060	623,985	877,907	646,510	697,416	777,547	682,442
Lucas	913,334	829,612	1,012,840	706,988	1,067,301	877,195	822,690	814,488	1,014,330	916,422
Madison	2,446,300	2,485,569	2,931,910	2,686,416	2,635,487	2,197,225	3,983,880	2,824,405	3,633,900	2,849,697
Madison	48,313	392,600	577,794	450,723	213,668	444,144	416,668	451,832	682,243	567,222
Malone	1,743,740	1,476,714	1,949,689	1,763,683	1,631,619	1,455,135	2,016,496	1,299,197	2,909,384	1,794,112
Marion	771,475	451,179	890,193	724,606	436,308	777,854	719,013	728,489	1,005,151	687,320
Medna	371,841	357,391	370,571	382,991	319,618	268,394	323,928	326,882	396,881	1,686,512
Melrose	1,900,871	1,954,900	2,154,719	2,143,040	1,370,095	1,641,644	2,096,252	1,566,306	2,468,881	2,063,822
Merrimack	2,022,971	2,392,837	2,493,440	2,519,873	2,149,851	1,902,533	1,761,560	1,761,560	2,683,779	2,063,822
Middlebury	453,196	395,478	578,345	549,574	490,920	390,870	649,208	532,871	1,083,384	588,583
Montgomery	1,402,409	1,988,223	1,768,729	2,028,243	1,908,884	1,118,564	2,173,938	1,467,960	2,069,967	1,680,195
Morgan	954,750	414,222	603,648	586,106	496,704	381,757	960,292	467,960	586,668	627,117
Morris	867,560	714,801	1,183,180	705,233	770,324	849,314	982,656	771,235	1,102,462	1,109,115
Morris	478,265	806,496	1,158,392	1,017,795	1,072,461	698,356	1,027,337	841,998	1,049,738	628,788
Muskegon	775,023	456,811	1,211,337	673,564	733,524	878,677	706,809	683,927	1,073,900	628,788
Noble	2,659,710	1,905,010	2,434,210	1,170,366	2,548,787	2,170,366	3,177,585	1,162,070	1,925,335	2,477,194
North	577,578	665,279	696,138	608,918	611,585	539,078	617,962	473,038	651,005	662,910
Orleans	2,731,578	2,816,019	3,036,315	2,831,153	2,976,494	2,254,472	3,157,965	2,288,445	3,431,553	2,949,668
Packaway	840,882	811,633	818,732	707,468	797,768	621,307	785,948	848,649	796,391	623,679
Portage	478,485	281,908	588,452	441,926	116,182	489,381	388,212	497,454	695,627	446,843
Preble	2,041,628	2,309,948	2,607,133	2,605,172	2,061,821	1,660,045	2,507,491	1,537,250	2,793,717	2,116,062
Putnam	2,181,727	2,081,088	2,677,680	2,343,551	1,969,480	2,431,147	3,023,122	1,829,837	3,261,499	2,601,494
Rehoboth	1,031,757	780,285	1,372,314	1,023,263	864,279	945,983	1,308,236	1,023,984	1,253,450	1,102,010
Ross	2,041,990	2,519,002	3,075,678	2,231,839	2,898,009	1,732,462	3,304,574	3,114,693	2,449,357	2,498,190
Sandusky	1,632,500	1,434,182	1,673,076	1,380,767	1,202,663	1,373,728	1,474,840	1,465,867	2,056,915	1,451,885
Santo	672,572	728,286	697,136	590,141	667,968	525,367	855,810	640,529	558,771	774,136
Seneca	1,744,540	1,695,087	2,291,270	1,827,684	1,673,541	1,857,142	1,801,515	1,682,183	2,228,495	1,731,338
Shelby	1,488,513	1,673,113	2,134,387	1,709,469	1,710,372	1,608,075	2,297,897	1,237,300	2,783,137	1,636,396
Stark	1,153,528	1,013,913	1,301,905	1,066,597	930,299	1,114,138	1,309,470	1,102,941	1,325,034	1,076,804
Summit	583,678	417,914	803,266	639,773	563,512	566,433	571,468	651,123	743,137	580,650
Tremont	417,489	222,970	643,637	339,272	70,395	367,513	303,795	544,999	593,174	462,275
Tuscarawas	684,472	691,254	816,179	661,522	647,721	590,238	791,380	771,376	842,961	627,542
Union	1,648,184	1,361,446	2,169,584	1,633,064	1,720,799	1,664,659	2,229,616	1,491,727	2,124,346	1,765,008
Van Wert	2,241,270	2,127,426	2,866,200	2,388,668	1,721,400	1,664,659	2,229,616	1,491,727	2,124,346	1,765,008
Vinton	385,520	242,364	272,297	241,327	212,017	180,693	266,123	1,327,476	2,498,029	2,193,680
Warren	1,236,370	1,177,367	1,608,615	1,862,474	1,602,924	1,200,006	1,737,431	234,386	1,976,072	1,876,072
Washington	526,960	519,551	663,319	566,080	461,933	461,933	727,312	1,165,074	1,988,080	1,924,521
Wayne	1,461,293	1,125,539	1,690,576	1,370,780	1,006,843	1,236,646	1,712,987	1,446,860	1,587,610	1,423,763
Williams	1,086,213	823,756	1,566,271	1,079,472	1,104,030	1,286,270	1,101,567	986,976	1,171,567	1,118,563
Wood	3,048,579	2,611,890	3,831,536	2,782,268	2,782,268	2,424,860	3,431,449	3,431,449	3,431,449	3,431,449
Wyandot	1,341,944	1,085,028	1,680,670	1,586,485	1,266,134	1,383,362	1,720,919	1,162,347	1,593,714	1,574,781
Total product.....	102,622,908	100,620,205	127,044,784	108,535,592	100,829,653	92,820,349	122,675,249	92,369,811	143,161,676	115,138,669
Total area.....	2,840,594	2,894,113	3,011,241	2,865,190	3,066,756	2,946,473	3,180,066	3,079,376	3,361,166	3,026,666

Average area for 10 years, 3,026,063 acres.  
Average product for 10 years, 108,552,193 bushels.

COMPARATIVE TABLE SHOWING PRODUCTION OF MEADOWS IN OHIO FOR TEN YEARS.

Counties.	Tons of Hay.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....	14,965	16,963	15,901	10,322	12,855	14,144	11,134	14,221	12,124	10,767
Allen .....	31,500	42,880	29,422	30,467	26,122	16,948	9,741	17,155	22,709	20,894
Ashtabula .....	92,781	43,109	36,012	35,761	37,967	32,308	25,804	17,155	26,550	26,026
Ashland .....	72,681	70,065	64,663	71,745	71,768	66,712	64,312	64,755	65,452	67,306
Athens .....	22,608	25,644	20,962	17,111	17,111	17,082	16,332	23,759	21,333	17,678
Auglaize .....	17,080	24,009	27,288	15,234	17,703	11,743	7,480	13,157	15,121	14,891
Belmont .....	48,383	45,823	27,294	33,518	44,307	39,909	27,663	26,887	40,264	37,060
Brown .....	16,739	17,897	11,540	15,493	16,559	15,709	11,939	16,533	13,724	14,475
Bullitt .....	21,007	22,543	15,583	14,754	16,509	15,354	12,385	15,820	14,611	14,131
Carroll .....	22,315	26,641	20,084	25,241	33,089	31,885	28,049	35,787	31,184	28,688
Champaign .....	18,486	26,044	14,725	9,040	14,283	11,743	7,926	21,024	12,583	8,009
Clark .....	21,975	27,355	20,357	20,243	24,087	21,548	11,926	14,811	16,021	11,951
Clermont .....	21,232	18,769	15,822	18,632	19,217	17,351	13,453	14,811	16,076	15,536
Columbiana .....	48,250	49,137	47,146	43,538	67,906	48,999	42,123	14,496	16,463	13,342
Coshocton .....	37,370	47,177	37,351	30,731	46,788	38,141	31,272	40,894	34,946	41,851
Crawford .....	31,637	47,418	30,550	26,951	37,322	34,097	21,056	19,814	23,806	27,247
Cuyahoga .....	26,763	32,496	26,578	29,897	34,051	36,883	35,673	38,673	26,719	31,651
Darke .....	17,866	31,118	17,144	16,721	20,326	13,000	8,248	12,763	14,152	14,152
Delaware .....	30,170	31,483	16,368	24,892	27,827	33,965	19,772	22,941	23,065	19,141
Delaware .....	46,519	56,631	48,894	47,967	47,787	42,161	33,309	42,287	23,883	27,562
Erie .....	11,564	15,250	9,836	10,079	15,004	8,807	8,386	9,238	11,783	12,301
Fairfield .....	42,381	58,947	43,500	30,065	54,063	39,809	24,097	40,943	29,509	22,504
Fayette .....	8,664	8,106	8,617	11,496	13,955	10,700	7,148	44,465	9,745	9,869
Franklin .....	44,118	47,462	37,997	41,962	43,692	39,046	25,071	12,880	28,419	27,882
Fulton .....	25,216	25,768	17,307	24,942	27,964	17,837	15,069	18,860	18,053	18,786
Gallia .....	17,248	12,952	13,067	15,415	15,942	11,622	9,302	11,522	12,336	11,380
Geauga .....	36,729	35,455	32,828	34,945	37,678	32,523	36,380	36,551	28,431	27,987
Greene .....	15,757	25,756	16,873	13,261	19,937	15,937	10,836	16,960	15,227	15,491
Guernsey .....	40,647	45,456	34,560	35,551	42,946	41,393	23,279	44,088	36,210	32,677
Hamilton .....	14,769	16,068	11,523	12,577	12,585	11,974	11,716	10,336	12,744	13,227
Hancock .....	30,653	49,456	29,507	30,241	40,158	27,846	12,090	22,951	28,655	31,597
Hancock .....	23,061	34,324	24,638	16,476	26,175	23,147	10,989	17,161	19,135	24,678
Hardin .....	35,272	42,040	38,290	36,430	39,988	31,979	30,947	36,817	33,208	34,741
Harrison .....	17,320	25,406	13,448	23,063	21,264	16,414	15,431	17,566	16,538	16,339
Henry .....	22,583	29,570	17,649	20,266	26,367	20,644	18,377	23,777	18,353	20,724
Hocking .....	15,515	18,597	14,764	13,069	15,622	14,034	10,903	13,915	11,538	11,117
Holmes .....	22,387	33,833	23,846	20,153	26,807	27,708	23,056	29,603	28,469	19,237
Huron .....	38,539	46,236	34,528	34,528	47,886	42,546	27,458	28,502	31,113	34,983
Jackson .....	15,583	14,725	10,100	11,897	13,702	12,871	9,085	11,181	11,146	10,659
Jefferson .....	32,773	29,165	21,165	26,837	31,963	31,876	25,406	32,626	31,058	28,448
Knox .....	63,627	63,579	45,778	45,718	46,515	46,886	29,573	37,816	26,920	28,857

Lake	17,246	15,856	13,684	17,809	18,105	17,890	14,886	18,241	12,647	12,027
Lawrence	7,887	6,022	4,451	64,458	67,740	74,794	7,601	70,004	4,686	4,511
Licking	61,608	76,618	64,346	16,089	16,932	16,934	56,809	70,004	4,686	4,511
Lewis	22,325	76,123	19,806	47,824	57,623	60,740	10,321	16,422	17,890	16,241
Loran	49,547	46,488	42,854	16,889	17,744	16,721	17,186	42,217	17,890	16,241
Lucas	17,062	15,344	13,337	13,901	16,774	16,721	11,841	13,600	12,628	11,514
Madison	18,862	21,456	10,788	13,901	16,774	16,721	8,140	17,207	9,766	8,692
Madison	46,483	51,547	42,278	13,901	16,774	16,721	40,562	38,380	31,346	24,763
Marion	28,907	39,753	23,778	11,748	16,774	16,721	11,126	16,086	17,411	28,514
Medina	21,900	21,103	18,286	33,944	40,151	39,965	33,944	27,723	27,625	28,514
Melms	39,111	43,115	33,043	16,235	18,312	18,312	13,476	17,147	16,847	10,242
Mercer	19,535	27,674	16,970	18,608	11,541	14,404	8,894	14,646	19,622	18,928
Miami	19,535	27,674	16,970	18,608	11,541	14,404	8,894	14,646	19,622	18,928
Montgomery	33,862	36,231	28,670	24,312	30,698	28,280	16,987	28,182	29,126	31,154
Montgomery	22,805	29,229	19,645	17,102	21,729	17,365	10,425	17,651	13,559	14,435
Morgan	29,018	39,332	27,501	29,705	29,705	26,218	20,763	31,152	28,270	26,962
Morrow	37,792	45,220	41,812	32,884	41,284	36,052	23,606	29,638	21,769	26,962
Muskingum	47,785	54,006	46,196	29,969	36,760	44,415	37,708	63,174	34,990	34,990
Noble	35,015	39,603	29,409	29,969	36,760	31,671	22,276	30,508	26,821	21,708
Ottawa	30,531	30,754	16,780	18,465	19,664	21,014	14,824	16,062	12,817	14,697
Paulding	30,531	30,754	16,780	18,465	19,664	21,014	14,824	16,062	12,817	14,697
Perry	23,714	33,276	25,051	23,205	26,291	21,523	16,529	18,871	23,224	18,210
Pickaway	18,562	23,406	15,018	21,355	29,351	26,678	19,557	31,061	24,870	18,210
Pikeaway	9,395	8,758	7,981	12,688	14,852	12,987	6,814	17,357	12,635	9,983
Portage	24,179	39,526	35,771	7,791	8,190	9,510	4,463	6,074	5,215	5,306
Preble	7,850	13,186	8,552	33,521	43,424	37,872	39,029	36,353	27,044	23,559
Putnam	26,442	31,606	21,382	26,451	29,990	20,865	15,751	17,705	22,847	19,513
Richland	32,644	41,683	30,935	27,252	36,998	33,675	27,641	30,086	28,908	26,454
Ross	14,909	19,139	12,688	13,490	14,757	12,288	8,187	14,795	13,190	10,354
Sandusky	21,571	26,311	17,583	18,868	25,474	27,116	17,824	23,347	20,849	18,415
Seneca	30,512	13,186	7,981	9,893	12,006	9,190	9,195	9,886	8,891	9,640
Shelby	31,922	46,531	23,186	26,892	40,812	28,506	15,122	21,317	25,063	26,643
Stark	16,104	21,393	10,783	9,083	14,731	9,084	6,750	55,101	43,472	53,927
Stark	62,114	64,489	54,180	49,283	64,724	62,969	52,701	60,882	55,462	61,407
Stummit	28,876	30,924	30,403	26,514	34,109	31,351	61,764	60,882	41,204	55,517
Tuscarawas	68,079	67,870	58,973	62,744	48,884	46,015	61,764	60,882	41,204	55,517
Union	43,932	52,566	46,418	41,513	28,938	27,293	13,084	22,153	16,003	13,436
Van Wert	37,887	48,788	28,537	26,799	37,455	28,869	22,807	30,889	23,116	24,716
Vinton	34,724	40,819	24,567	26,799	37,455	28,869	22,807	30,889	23,116	24,716
Warren	13,651	15,611	10,983	11,600	12,179	12,839	9,049	10,711	10,711	8,761
Washington	21,659	22,381	16,016	16,461	21,216	19,465	13,229	17,383	16,586	16,120
Wayne	33,943	36,709	17,154	31,663	31,663	29,683	26,516	32,046	33,392	26,709
Williams	34,552	56,054	46,902	42,659	67,639	40,724	42,571	49,134	41,313	41,649
Williams	35,577	43,029	26,885	31,751	37,944	33,541	30,178	26,230	20,518	23,843
Wood	35,873	47,262	20,501	28,686	34,776	33,181	24,950	28,772	23,688	23,121
Wyandot	26,799	42,469	27,990	29,288	30,154	35,450	15,180	16,925	20,583	23,731
Total product.....	2,567,364	3,068,777	2,254,398	2,222,021	2,685,592	2,370,842	1,844,892	2,339,399	2,034,980	1,972,659
Total area.....	2,168,404	2,476,129	2,124,791	1,871,290	2,290,354	1,975,387	1,653,897	1,960,476	2,072,781	1,776,075

Average area for 10 years, 2,037,308 acres.  
Average product for 10 years, 2,533,082 tons.



	1,119	222	376	1,056	291	945	1,171	1,477	1,187	1,481
Lake .....	363	269	168	708	767	758	822	352	560	1,491
Lawrence .....	16,783	3,529	5,977	20,260	9,837	6,583	14,890	10,371	6,941	15,480
Licking .....	21,825	9,089	7,978	25,748	15,474	23,448	21,979	16,102	486	17,563
Logan .....	17,096	7,794	9,795	14,312	6,858	8,872	10,598	16,911	7,286	6,984
Lorain .....	5,982	3,283	2,729	5,017	946	5,238	6,021	7,490	5,450	7,294
Lucas .....	12,997	193	4,679	18,922	11,880	12,827	8,912	8,213	1,591	9,724
Madison .....	7,258	4,191	2,371	7,640	3,037	4,114	8,250	6,337	6,966	9,144
Manhoning .....	20,179	7,728	8,970	22,985	14,062	15,339	18,968	22,019	2,217	10,915
Marion .....	21,733	13,235	11,942	21,170	11,556	23,684	16,297	26,006	8,475	15,303
Medina .....	603	458	409	1,772	1,035	2,934	8,297	356	892	2,181
Meigs .....	29,502	847	7,857	27,121	23,533	25,966	22,955	24,010	1,741	16,186
Mercer .....	11,758	1,450	4,730	24,505	16,296	14,888	14,156	18,484	2,827	12,090
Miami .....	634	276	604	2,163	487	583	1,623	142	268	3,559
Monroe .....	9,833	1,352	4,197	17,635	14,984	15,490	14,411	13,631	4,932	14,978
Montgomery .....	714	3,210	4,314	2,064	2,064	2,709	5,311	433	893	5,178
Morgan .....	22,570	7,745	8,233	20,440	11,247	15,390	24,985	25,483	4,586	12,866
Morrow .....	6,428	2,694	2,708	9,878	2,552	3,792	7,833	1,757	1,846	6,086
Muskingum .....	5,100	380	1,032	4,190	881	1,103	3,039	1,201	287	2,140
Noble .....	8,555	3,160	3,715	6,194	4,296	7,798	10,639	13,641	5,208	2,643
Ottawa .....	17,001	2,070	2,514	17,059	5,548	16,610	8,540	13,208	4,311	1,773
Paulding .....	7,962	3,368	6,135	12,115	3,850	4,981	6,766	1,842	2,604	8,110
Perry .....	10,382	1,886	3,657	13,000	9,791	11,574	9,061	5,990	5,341	9,188
Pickaway .....	9,789	671	1,275	7,073	2,507	3,524	2,316	1,155	2,032	3,177
Portage .....	9,378	4,046	5,715	11,270	3,755	7,325	7,310	7,635	3,456	11,963
Preble .....	20,702	4,988	7,478	17,027	18,940	10,713	15,244	13,638	8,621	11,597
Putnam .....	23,899	3,013	6,879	19,951	19,097	22,706	18,201	22,962	2,115	6,697
Richland .....	27,590	14,679	18,524	27,759	18,172	13,737	19,239	28,122	8,576	19,367
Ross .....	16,819	760	1,433	8,698	6,723	11,069	8,072	2,822	8,922	7,643
Sandusky .....	13,951	3,005	4,394	17,070	4,046	13,251	14,255	19,473	7,582	10,064
Scioto .....	1,179	986	773	1,853	1,393	2,051	2,594	476	2,461	2,601
Seneca .....	26,874	9,222	11,479	32,546	20,729	30,897	36,139	41,693	10,960	20,941
Shelby .....	19,797	328	3,403	19,530	18,838	20,150	18,684	17,298	790	12,637
Stark .....	16,996	9,472	11,947	20,562	8,971	12,604	16,008	13,845	9,501	18,002
Summit .....	11,172	7,153	6,843	13,946	4,786	6,357	6,891	6,421	3,139	6,150
Tumblull .....	1,688	643	466	2,768	520	2,745	3,724	3,724	1,976	5,017
Tuscarawas .....	6,107	3,084	5,164	9,741	2,405	2,374	4,226	2,245	852	4,559
Union .....	21,380	1,777	7,024	29,984	15,548	19,088	23,225	25,790	698	13,979
Van Wert .....	23,307	646	3,414	26,431	8,627	21,072	18,465	19,600	3,900	7,722
Vinton .....	433	73	136	442	347	440	105	168	168	1,063
Warren .....	9,712	3,309	2,371	11,127	7,247	9,771	9,245	7,525	6,461	8,522
Washington .....	2,293	593	1,199	2,052	852	2,490	3,253	346	757	2,444
Wayne .....	35,635	21,446	24,725	37,076	19,400	21,892	21,105	23,939	13,592	21,305
Williams .....	21,167	10,241	7,847	24,352	3,659	22,713	19,588	28,827	19,685	4,744
Wood .....	21,822	2,311	5,115	18,593	5,999	18,957	17,070	20,979	9,877	7,463
Wyandot .....	28,096	2,722	5,074	18,459	15,462	18,131	23,457	27,771	5,725	20,418
Total product .....	1,132,515	233,524	425,507	1,219,405	696,997	972,580	1,029,948	1,051,464	361,860	749,225

Average product for 10 years, 790,014 tons.

COMPARATIVE TABLE SHOWING PRODUCTION OF CLOVER SEED IN OHIO FOR TEN YEARS.

Counties.	Bushels of Seed.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams	3,735	568	593	1,469	2,269	2,535	7,905	82	966	3,768
Allen	20,683	986	2,649	3,403	2,175	5,825	7,831	12,824	200	2,930
Ashland	8,190	1,368	1,764	2,277	2,389	4,646	4,111	6,793	2,084	4,689
Ashabula	94	.....	56	131	.....	68	138	416	38	77
Athens	21,107	400	9	59	28	62	174	.....	.....	191
Auglaize	1,901	28	2,718	6,085	6,943	9,397	14,560	7,673	370	7,296
Belmont	1,901	28	2,718	6,085	6,943	9,397	14,560	7,673	370	7,296
Berlin	1,901	28	2,718	6,085	6,943	9,397	14,560	7,673	370	7,296
Brown	1,901	28	2,718	6,085	6,943	9,397	14,560	7,673	370	7,296
Butler	11,086	257	2,691	2,619	4,612	5,288	7,948	238	645	920
Carroll	2,961	257	1,273	2,619	4,612	5,288	7,948	238	645	920
Champaign	20,122	123	2,940	4,993	6,682	7,410	9,319	7,290	3,842	6,520
Clark	12,433	8	483	3,722	5,488	3,613	3,831	7,737	66	8,773
Clermont	218	83	131	311	461	593	1,371	224	272	8,374
Columbiana	12,121	222	702	3,048	3,861	5,260	2,601	3,964	1,086	8,969
Coshocton	2,081	586	983	1,616	1,190	1,619	835	581	219	7,929
Crawford	3,972	1,107	2,673	4,024	1,486	1,619	5,666	679	4,116	6,011
Cuyahoga	13,810	3,347	2,693	4,024	1,486	3,800	6,661	13,000	2,144	5,711
Darke	82	2	.....	47	.....	60	21	305	3	5,106
Defiance	26,981	413	4,514	6,389	11,884	12,936	18,783	14,604	930	17,106
Delaware	21,707	3,779	6,965	8,061	4,348	12,694	6,678	18,006	18,006	4,419
Erle	12,607	384	474	1,896	1,811	2,772	4,941	3,800	417	2,428
Fairfield	4,120	572	1,300	1,231	1,811	1,664	1,461	2,638	811	1,494
Fayette	21,870	1,069	1,542	9,080	7,204	1,564	11,544	6,410	7,507	17,068
Franklin	6,062	117	659	3,489	5,062	5,495	3,212	4,169	2,690	4,690
Franklin	11,702	121	213	5,133	4,508	3,490	4,310	4,001	2,507	7,816
Fulton	13,134	3,539	5,118	6,188	744	6,171	3,762	8,848	11,169	6,933
Gallia	12	.....	.....	31	40	166	279	16	101	224
Geauga	449	.....	.....	145	5	17	48	20	65	28
Greene	14,968	162	931	4,773	7,026	5,794	8,182	7,649	6,261	11,152
Guernsey	1,109	27	34	803	32	401	1,069	8	41	1,102
Hamilton	1,445	237	2,803	4,201	5,248	8,628	11,887	18,783	2,177	4,489
Hancock	20,226	24	175	437	1,344	1,712	1,537	1,481	1,364	1,145
Hardin	11,731	1,507	1,501	3,963	4,293	5,876	8,710	14,210	418	3,830
Harrison	1,774	36	168	1,071	71	143	894	87	217	1,270
Henry	24,877	3,483	6,929	8,375	2,588	12,006	7,711	12,830	10,794	2,161
Hocking	11,462	1,777	1,434	4,861	9,240	6,686	10,306	1,609	3,692	6,753
Hocking	11,462	1,777	1,434	4,861	9,240	6,686	10,306	1,609	3,692	6,753
Holmes	9,941	126	1,198	1,067	580	3,322	2,390	3,171	1,520	5,806
Huron	12,118	2,610	4,571	5,325	2,927	5,322	5,612	3,171	1,520	5,806
Jackson	14	13	1,531	4,347	2,537	5,257	4,049	12,333	4,781	3,586

Jefferson	3,362	145	553	2,652	389	198	1,680	136	364	3,002
Knox	1,799	1,296	1,982	1,089	1,911	2,365	4,487	3,786	1,526	8,533
Lake	114	.....	.....	104	59	84	13	69	74	53
Lawrence	.....	.....	.....	39	37	9	47	17	56	56
Licking	.....	.....	.....	5,257	4,038	2,798	6,490	491	3,492	10,107
Logan	17,118	633	1,426	5,623	5,894	10,338	15,984	8,388	7,625	7,625
Loran	21,673	1,73	3,438	379	89	885	798	2,691	579	494
Lucas	1,454	262	1,106	2,206	689	5,007	3,613	5,261	6,013	795
Madison	5,154	1,234	2,146	5,992	7,843	5,097	3,870	5,240	878	4,298
Madison	16,876	288	1,246	353	78	325	270	318	526	1,535
Marion	1,280	288	872	3,352	4,640	5,447	4,016	10,963	854	2,067
Marion	17,178	872	3,678	3,352	4,640	5,447	4,016	10,963	854	2,067
Medina	6,592	436	1,175	1,752	883	3,949	2,074	5,153	1,760	2,854
Melms	112	73	52	52	138	70	313	77	1,760	2,854
Mercer	26,844	594	7,482	9,722	9,083	12,820	23,120	17,208	1,620	12,644
Miami	9,273	5	982	2,605	4,753	8,863	6,492	10,114	1,359	8,964
Monroe	688	93	182	935	1,139	145	1,170	94	42	1,011
Montgomery	5,711	412	1,491	3,399	6,231	3,899	6,092	6,572	1,310	1,954
Morgan	12,994	971	2,571	2,296	1,970	3,870	2,718	7,966	1,263	1,066
Morrow	2,414	95	244	1,799	1,154	418	3,383	80	387	2,677
Muskingum	2,414	172	204	1,799	1,154	418	3,383	80	387	2,677
Noble	2,414	172	204	1,799	1,154	418	3,383	80	387	2,677
Ottawa	3,183	479	1,765	889	748	1,365	1,160	4,081	2,786	683
Paulding	17,038	1,109	2,780	2,682	2,226	6,861	5,629	12,477	5,244	1,376
Perry	10,302	1,002	2,040	5,065	2,026	1,683	5,430	819	1,785	6,110
Pikaway	13,616	1,220	1,670	5,844	3,690	8,228	7,670	4,401	6,991	12,256
Pike	2,395	431	667	677	2,433	1,380	3,303	137	1,476	2,296
Portage	2,088	479	477	840	414	1,188	677	833	257	1,844
Preble	11,088	637	2,143	3,041	5,961	7,679	7,747	3,690	3,147	6,640
Pulham	24,630	1,697	7,093	6,110	3,644	9,834	8,152	18,065	1,742	4,896
Richland	14,441	2,793	2,973	3,352	2,496	6,631	4,429	10,137	1,370	5,294
Ross	10,353	667	769	3,620	5,823	6,650	11,133	1,827	4,344	11,191
Sandusky	9,212	721	1,654	4,668	1,611	2,385	3,776	9,462	4,535	3,436
Seneca	312	96	20	70	252	410	1,162	32	264	738
Shelby	26,240	2,791	4,209	11,167	8,444	1,018	11,714	19,605	7,990	8,683
Shelby	14,040	126	2,022	5,533	10,635	10,948	7,546	9,181	96	6,342
Stark	5,725	1,099	1,850	1,645	1,017	2,438	2,517	1,821	539	3,557
Summit	2,212	448	13	765	240	1,223	635	932	149	397
Trumbull	263	17	32	32	17	122	101	60	39	229
Tuscarawas	4,971	1,118	2,128	3,467	806	726	3,084	504	297	2,534
Union	17,776	483	1,172	2,745	3,442	4,154	6,873	8,441	168	3,112
Van Wert	18,613	437	2,923	4,259	2,701	6,371	4,514	10,257	2,243	8,694
Vinton	67	3	75	37	79	86	361	253	253	330
Warren	2,106	29	190	1,160	2,064	2,064	3,512	1,141	1,138	4,952
Washington	968	76	228	484	118	243	1,849	60	721	791
Wayne	10,815	3,713	2,690	3,141	2,776	4,948	5,538	6,659	1,939	4,454
Williams	18,668	4,987	6,483	9,076	2,489	13,813	8,710	20,865	18,723	2,880
Wood	22,357	1,264	5,229	6,116	2,172	6,149	4,109	15,411	9,953	7,080
Wyandot	19,313	1,328	2,434	4,928	5,070	8,154	6,587	12,976	2,367	7,983
Total product	805,974	71,911	145,735	266,240	241,514	335,272	420,986	462,010	195,972	350,777

Average product for 10 years, 329,688 bushels.

COMPARATIVE TABLE SHOWING PRODUCTION OF IRISH POTATOES IN OHIO FOR TEN YEARS.

Counties.	Number of Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....	15,156	20,098	21,568	16,301	28,591	18,814	23,524	14,688	22,263	13,701
Allen .....	60,023	42,704	66,441	56,789	63,492	43,545	79,706	36,060	54,096	51,029
Ashland .....	90,134	82,437	91,591	94,596	83,163	91,416	111,043	45,538	94,254	93,509
Ashtabula .....	291,809	219,091	435,815	306,658	340,247	207,207	204,586	447,711	403,128	236,789
Athens .....	31,969	46,375	44,530	43,975	46,577	19,389	33,960	19,397	21,779	33,005
Auglaize .....	101,438	67,695	67,988	72,816	67,492	71,778	107,039	54,071	66,881	45,914
Belmont .....	86,739	91,587	111,574	123,539	131,524	97,609	106,367	63,129	73,542	90,653
Brown .....	16,577	28,694	35,190	35,939	34,910	19,874	33,832	14,935	23,296	24,745
Butler .....	52,922	110,091	116,107	134,939	98,665	72,445	89,490	46,446	90,998	63,276
Carroll .....	66,039	67,755	86,763	61,187	64,487	42,132	51,167	35,962	61,582	63,610
Champaign .....	32,861	30,722	43,645	37,305	48,953	23,795	48,408	26,442	35,898	27,495
Clark .....	87,750	86,763	82,191	76,352	85,509	46,884	73,994	34,238	61,176	49,355
Clermont .....	32,022	71,446	76,440	76,138	65,475	54,149	75,403	37,667	73,492	69,744
Columbiana .....	14,009	26,326	33,596	24,949	20,776	18,462	34,737	17,544	36,005	37,002
Coshocton .....	960,053	271,205	381,376	221,401	233,889	201,655	350,709	153,461	181,330	184,534
Crawford .....	107,873	157,223	143,738	116,030	93,361	80,089	105,133	61,090	65,112	85,070
Cuyahoga .....	133,087	123,266	172,067	130,104	143,150	133,735	162,589	91,745	126,445	109,789
Darke .....	484,090	474,369	675,134	601,090	665,801	641,831	487,748	704,837	603,554	551,647
Defiance .....	68,779	74,311	74,437	96,359	143,318	85,186	130,244	69,939	120,118	90,034
Delaware .....	52,923	53,824	51,315	73,390	112,841	79,185	92,443	51,003	123,284	108,818
Erie .....	50,123	48,465	61,521	55,009	45,978	34,180	53,105	27,010	23,905	31,519
Fairfield .....	315,155	333,322	403,075	316,009	365,010	275,590	263,407	361,563	364,365	263,009
Fayette .....	63,173	89,582	92,693	91,570	110,019	98,268	104,047	45,067	57,997	84,854
Franklin .....	82,793	89,580	92,693	91,570	110,019	98,268	104,047	45,067	57,997	84,854
Fulton .....	128,578	131,783	208,759	245,706	271,212	165,867	125,406	83,660	68,666	67,766
Galla .....	83,852	97,494	108,993	74,389	139,231	102,133	97,512	71,490	131,068	131,068
Geauga .....	24,332	27,189	27,555	23,153	26,372	15,389	21,483	7,668	17,691	16,705
Greene .....	247,332	219,631	374,696	254,300	234,978	187,475	63,389	239,818	293,792	228,170
Hamilton .....	43,336	40,369	80,510	83,716	73,965	39,613	82,237	68,299	66,299	61,225
Harrison .....	219,444	463,323	483,697	402,600	364,966	367,660	370,796	196,762	306,568	423,216
Hancock .....	81,623	90,182	90,904	67,000	81,224	90,660	121,361	84,063	113,617	88,793
Hardin .....	77,516	108,026	104,832	82,464	60,767	144,427	167,685	66,170	556,621	70,592
Harrison .....	4,166	15,954	30,181	26,492	31,106	19,206	24,853	18,143	29,484	32,977
Henry .....	69,674	70,671	73,737	56,196	103,683	70,510	84,677	44,727	111,838	100,657
Highland .....	3,400	9,575	14,824	17,046	29,984	12,636	23,470	11,245	22,516	20,043



Hocking	48,541	48,983	59,831	57,757	61,382	46,804	66,475	27,915	41,777	54,570
Holmes	82,457	79,290	79,149	69,045	72,596	66,979	64,198	61,699	68,163	79,333
Huron	117,919	119,945	143,076	127,472	125,738	133,374	123,676	114,138	133,712	96,619
Jackson	18,727	20,587	14,120	14,760	21,035	19,878	19,730	10,263	11,752	17,337
Jefferson	83,451	80,859	94,651	91,650	71,811	64,833	71,252	41,311	60,770	58,241
Knox	23,553	22,980	34,373	43,326	43,111	44,372	55,976	27,607	31,611	44,295
Lake	123,863	127,063	136,520	164,345	188,942	151,291	186,220	187,156	183,174	185,542
Lawrence	42,863	47,863	38,520	41,238	38,706	27,739	38,669	19,138	36,158	30,034
Licking	136,934	140,572	175,259	128,473	162,471	100,669	118,380	79,272	86,198	108,314
Logan	41,682	44,123	61,314	38,525	47,748	32,831	49,581	28,060	35,180	38,702
Loran	247,702	176,289	319,406	284,238	460,230	271,991	286,545	219,308	273,880	186,114
Lucas	299,541	368,335	324,553	268,469	220,669	214,946	236,646	277,480	429,830	230,703
Madison	8,260	15,236	25,510	23,913	28,738	12,743	15,091	9,422	10,879	15,658
Mahoning	293,892	299,397	301,545	234,002	247,878	326,131	209,642	167,348	201,250	172,425
Marion	64,644	56,542	87,981	74,102	70,563	83,373	94,012	67,019	67,496	68,059
Medina	362,910	515,920	435,081	306,470	369,660	299,437	208,757	231,928	295,735	216,759
Melms	63,104	68,837	65,465	64,519	65,283	44,730	64,462	25,632	60,850	42,306
Mercer	46,547	39,411	61,563	54,043	64,505	52,150	84,502	47,196	42,274	31,335
Miami	73,506	85,349	94,104	109,613	120,376	52,816	98,850	49,722	87,070	71,413
Monroe	99,573	106,466	128,689	109,613	150,200	114,995	139,953	93,139	129,325	121,005
Montgomery	46,935	65,262	88,180	130,011	126,412	59,781	100,646	45,483	77,181	72,305
Morgan	25,196	36,371	46,498	68,605	55,555	37,339	52,420	27,649	26,982	38,204
Morrow	123,831	106,169	128,417	139,167	116,945	85,524	110,956	46,938	64,750	67,795
Muskingum	78,682	97,079	124,174	69,905	72,237	59,902	97,350	51,792	63,350	62,553
Noble	46,440	61,536	68,787	69,905	63,948	118,935	50,931	35,316	46,677	34,506
Ottawa	41,686	43,870	46,186	37,535	63,948	42,460	47,156	30,577	61,103	155,748
Paulding	27,605	22,277	23,830	22,028	55,952	59,935	56,686	32,086	42,467	57,530
Perry	64,598	45,200	64,879	58,472	68,585	41,141	66,686	20,013	45,988	36,246
Pickaway	33,291	26,695	34,020	35,945	32,243	33,629	41,371	20,013	45,988	31,765
Pike	45,140	44,635	74,931	38,245	57,935	35,168	66,428	27,714	63,698	712,378
Portage	737,256	667,184	940,495	623,024	765,351	630,889	601,531	714,431	813,049	40,572
Preble	16,619	17,459	25,315	32,332	41,950	22,067	40,049	22,611	60,707	74,519
Putnam	213,625	190,667	91,375	163,145	87,016	182,075	124,854	63,048	129,987	161,418
Richland	23,638	199,095	214,969	188,715	186,016	198,376	130,446	136,587	161,434	48,194
Ross	52,650	67,638	97,527	93,023	87,431	59,282	78,288	33,946	44,234	48,194
Sandusky	227,633	254,855	250,988	918,227	979,777	213,942	170,032	170,312	245,891	162,900
Scioto	132,084	108,627	126,605	108,253	119,190	51,797	101,520	55,646	75,327	81,045
Seneca	140,093	189,329	209,691	178,437	196,754	180,480	154,678	129,574	175,098	112,555
Shelby	55,939	48,884	47,314	41,312	65,882	41,376	65,065	37,852	57,393	36,202
Stark	498,140	448,869	586,243	333,903	497,912	361,289	404,162	287,908	327,709	314,916
Summit	412,006	335,579	566,923	384,851	338,880	286,166	327,643	327,643	238,935	238,935
Tumbull	308,411	211,617	337,125	237,652	376,023	277,837	222,978	333,400	363,689	318,782
Tuscarawas	161,748	179,842	216,746	246,152	176,772	146,104	188,194	102,261	127,653	139,306
Union	13,476	9,685	25,383	21,491	29,040	14,678	26,646	8,960	6,716	10,572
Van Wert	70,669	56,315	63,603	61,578	56,778	41,867	80,840	39,674	94,011	60,440
Vinton	29,111	24,765	15,537	18,934	18,885	22,139	33,144	15,440	27,052	21,052
Warren	12,065	19,486	15,537	32,963	32,647	24,487	17,175	18,529	33,517	26,520
Washington	136,346	192,241	191,621	192,116	202,615	142,250	140,752	91,820	142,089	122,314
Wayne	597,529	574,285	885,527	495,229	600,178	439,791	885,049	189,821	298,606	241,197
Williams	45,510	51,879	76,502	63,709	102,841	75,025	81,006	41,434	93,238	112,681

COMPARATIVE TABLE SHOWING PRODUCTION OF IRISH POTATOES IN OHIO FOR TEN YEARS—Concluded.

Counties.	Number Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Wood .....	10,130	98,587	94,242	79,014	135,547	119,026	78,592	79,796	133,774	94,274
Wyandot .....	47,960	34,729	51,915	54,933	63,472	57,980	84,962	34,398	66,627	57,312
Total product.....	10,555,238	10,825,659	13,615,184	10,967,796	11,998,075	9,997,543	10,507,822	8,296,236	11,313,191	9,203,633
Total area.....	134,667	125,737	126,683	131,338	124,826	109,811	113,064	115,600	131,234	118,584

Average area for 10 years, 123,154 acres.

Average product for 10 years, 10,727,037 bushels.

COMPARATIVE TABLE SHOWING PRODUCTION OF TOBACCO IN OHIO FOR TEN YEARS.

Counties.	Pounds of Tobacco.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....	2,317,769	3,074,552	3,173,661	2,822,122	2,604,520	1,681,840	2,465,940	2,217,898	2,713,872	2,131,862
Allen .....	.....	79	204	.....	.....	.....	.....	.....	1,400	.....
Ashtabula .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Athens .....	1,075	7,100	9,050	3,000	.....	3,800	8,390	12,000	5,720	2,600
Auglaize .....	4,300	684,026	1,026,014	1,343,499	875,315	823,282	1,065,562	824,509	21,200	11,550
Bellmont .....	709,945	4,898,925	4,533,217	3,920,895	4,619,448	4,237,990	4,527,068	5,098,122	762,940	704,452
Brown .....	484,945	1,155,850	1,548,480	1,227,730	1,058,770	735,100	422,430	710,375	4,774,309	4,534,064
Butler .....	679,990	.....	.....	.....	.....	.....	.....	.....	713,800	1,029,685
Carroll .....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Champaign .....	69,000	87,990	61,100	36,922	35,230	33,400	52,780	52,190	115,240	55,262
Clark .....	180,000	198,650	187,476	121,622	199,000	113,450	232,890	185,635	285,580	222,335
Clermont .....	232,320	2,039,640	2,177,537	1,950,645	1,998,301	1,897,956	2,058,776	2,385,483	2,984,535	2,476,932
Clinton .....	6,650	17,000	7,000	10,400	9,900	17,700	18,450	57,900	73,040	74,624
Columbiana .....	2,120	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coshocton .....	.....	.....	100	.....	.....	1,000	1,500	1,500	.....	.....
Crawford .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cuyahoga .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Darke .....	12,433,331	13,639,460	15,370,410	11,809,027	9,301,531	8,712,814	10,279,035	8,310,165	11,106,872	10,451,175
Defiance .....	.....	.....	.....	.....	.....	1,500	500	1,500	1,330	3,950
Delaware .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Erle .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fairfield .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fayette .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fulton .....	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gallia .....	837,305	570,930	403,208	662,730	366,520	360,160	436,768	415,228	700,992	721,720
Geauga .....	.....	.....	3,000	51	700	.....	1,100	.....	.....	.....
Greene .....	281,705	627,408	539,825	454,235	343,495	176,048	403,068	331,896	461,068	489,975
Guernsey .....	.....	101,400	219,965	267,967	138,785	163,560	144,530	133,132	141,720	99,086
Hamilton .....	100,870	186,945	217,070	231,600	132,337	119,000	124,700	147,260	101,900	189,270
Hancock .....	20,144	.....	.....	.....	.....	.....	.....	7,300	.....	.....
Hardin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrison .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry .....	.....	1,605	.....	.....	.....	.....	.....	.....	.....	.....
Highland .....	21,845	20,506	19,863	6,000	4,000	10,000	2,400	24,350	54,100	33,650



Shelby .....	151,360	160,310	108,100	76,770	32,990	43,355	153,344	78,367	338,130	173,230
Stark .....	.....	.....	.....	.....	500	5,150	2,852	2,200	5,116	1,000
Summit .....	.....	.....	.....	.....	.....	.....	700	100	.....	.....
Trumbull .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuscarawas .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union .....	83	.....	.....	.....	.....	.....	.....	.....	.....	.....
Van Wert .....	4,000	.....	2,000	.....	27	.....	.....	640	2,000	150
Vinton .....	5,500	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren .....	.....	.....	.....	.....	30	.....	.....	.....	.....	2,200
Washington .....	1,422,475	3,048,525	4,129,975	2,967,346	4,100,536	2,014,207	2,853,282	2,724,553	3,069,224	3,446,973
Wayne .....	1,200	900	9,085	150	4,800	6,070	4,750	2,700	2,200	4,630
Williams .....	250,000	217,190	337,950	178,825	229,990	313,425	331,239	345,765	889,225	334,710
Wood .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyandot .....	.....	.....	.....	69	.....	.....	200	.....	.....	.....
Total product .....	42,330,236	56,744,968	70,706,878	55,332,635	49,944,056	39,343,870	49,641,586	42,355,378	50,454,983	52,484,457
Total area .....	60,987	75,358	70,050	65,625	53,451	50,878	55,322	53,829	67,522	56,242

Average area for 10 years, 61,926 acres.  
 Average product for 10 years, 60,922,999 pounds.

COMPARATIVE TABLE SHOWING PRODUCTION OF BUCKWHEAT IN OHIO FOR TEN YEARS.

Counties.	Number of Bushels.									
	1908.	1917.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams	3	3	32	90	60	10	25	47	73	40
Allen	20	20	32	90	60	10	13	47	186	115
Ashtabula	225	181	51	241	395	135	685	407	3,378	253
Ashland	72,046	75,883	93,080	86,578	92,475	52,841	37,866	84,077	44,697	33,974
Athens	786	756	484	1,080	777	255	90	28	90	65
Aurora	.....	.....	180	121	204	245	.....	28	2,624	230
Belmont	680	706	535	1,014	740	160	386	430	923	1,344
Brown	38	25	25	276	720	142	95	1,132	28	35
Bull	.....	.....	100	.....	8	60	.....	50	37	.....
Butler	606	762	405	333	438	65	312	703	1,064	440
Cambridge	121	180	116	466	159	19	16	52	1,244	67
Champaign	60	15	72	209	60	52	24	107	236	56
Clark	.....	50	35	.....	.....	69	91	71	261	153
Clermont	.....	30	30	80	25	2	30	195	688	208
Columbiana	846	1,310	713	1,642	3,250	570	1,100	970	1,576	988
Coshocton	329	347	172	1,463	1,536	507	2,586	2,811	4,625	1,156
Crawford	25	283	116	61	110	230	130	161	163	163
Cuyahoga	55	83	43	97	143	158	248	404	123	221
Darke	14	50	49	74	167	46	202	217	829	534
DeLancey	260	492	508	207	1,146	1,201	299	301	1,076	2,817
Delaware	378	180	154	176	180	340	1,050	612	1,207	383
Eric	5,051	4,156	3,107	3,642	4,926	3,008	1,932	3,632	14,085	2,238
Fairfield	10	45	.....	.....	200	.....	71	164	682	147
Fayette	235	62	72	35	886	.....	15	.....	1,146	159
Franklin	3,971	2,335	1,743	2,490	3,458	20	217	33	210	7,341
Fulton	32	205	50	32	46	1,233	1,299	2,533	6,014	68
Gallia	.....	.....	50	.....	.....	16	192	66	50	.....
Geauga	19,397	18,397	20,489	14,937	12,078	6,277	4,095	4,912	2,386	1,575
Greene	60	1	239	190	75	1,110	1,400	46	110	121
Guernsey	355	470	393	2,062	824	341	2,035	1,533	1,573	1,097
Hamilton	.....	60	230	70	6,568	10	5	24	38	15
Hancock	1	.....	370	35	66	77	80	90	570	168
Hardin	620	503	352	158	434	247	608	61	90	29
Harrison	166	175	35	415	405	13	205	502	527	84
Henry	1,117	3,333	236	253	600	292	212	518	1,317	2,862
Hughland	.....	12	.....	12	10	10	212	276	341	1,189

Hoeking	1,225	1,119	821	1,604	1,580	1,034	3,507	2,942	4,885	1,793
Holmes	1,102	1,041	844	2,065	2,065	294	598	287	2,483	740
Huron	1,138	2,579	667	849	603	295	598	50,415	2,483	719
Jackson	4,078	2,530	1,890	2,843	1,445	1,173	1,784	1,981	1,377	1,598
Jackson	591	497	512	433	114	143	153	445	356	128
Knox	.....	.....	.....	.....	.....	36	973	1,461	2,393	347
Lake	10,583	11,813	9,353	8,340	8,340	4,781	2,610	2,937	1,263	1,263
Lawrence	.....	.....	.....	.....	.....	.....	256	.....	11	13
Licking	514	328	530	1,359	1,989	600	1,847	1,280	2,151	1,880
Logan	624	183	210	761	761	87	738	168	2,105	124
Loran	68	285	10	266	266	311	265	741	498	180
Lucas	7,030	3,332	4,860	5,664	10,965	4,717	3,943	5,020	10,087	13,280
Madison	30	284	.....	64	.....	.....	48	16	941	.....
Madison	4,841	3,125	3,614	2,596	4,016	1,316	2,100	2,728	2,124	1,628
Marion	.....	.....	.....	112	112	.....	24	12	128	1,028
Marion	290	1,121	530	181	12	89	402	379	1,359	30,370
Medina	210	117	241	306	151	281	580	463	2,49	107
Melgs	.....	.....	.....	29	6	93	92	98	922	139
Mercer	.....	.....	.....	54	36	.....	36	.....	662	55
Miami	.....	.....	.....	53	36	.....	36	.....	662	55
Montgomery	3,348	5,686	2,408	5,487	2,900	1,652	9,251	4,925	3,775	4,392
Montgomery	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morgan	3,1	348	455	768	621	190	1,087	588	533	631
Morrow	30	275	30	.....	15	.....	453	439	721	118
Muskingum	52	80	175	63	195	31	174	384	375	712
Noble	298	17	156	166	189	20	431	1,225	885	715
Ottawa	150	65	.....	436	850	55	22	650	69	186
Paulding	177	537	482	2,529	1,844	1,070	1,934	2,338	2,128	2,423
Perry	1,142	1,793	7,045	2,529	1,844	1,070	1,934	2,338	2,128	2,423
Pickaway	.....	.....	.....	50	355	44	.....	.....	2,267	1,235
Pike	3,294	4,165	3,383	3,347	2,147	1,132	2,065	2,134	2,190	583
Portage	11,326	9,594	8,327	6,909	7,549	3,699	3,228	3,971	5,004	3,540
Proble	.....	.....	.....	15	10	40	.....	.....	183	183
Putnam	81	25	214	214	82	247	60	52	568	323
Richland	245	281	88	42	318	216	727	1,628	980	510
Ross	443	1,915	1,313	2,353	1,310	783	459	1,723	1,105	222
Sandusky	138	640	1,723	455	480	80	486	1,118	981	347
Seneca	8,166	10,814	10,221	6,580	3,110	1,512	1,643	1,532	768	718
Shelby	36	35	100	205	284	136	15	437	224	224
Shelby	587	208	55	30	.....	4	17	76	2,586	268
Stark	298	191	538	389	883	313	1,255	884	569	701
Summit	1,298	1,102	2,013	1,628	1,121	1,121	1,255	784	300	313
Summit	37,153	26,023	17,477	15,827	29,193	9,236	5,837	13,612	9,100	5,

COMPARATIVE TABLE SHOWING PRODUCTION BUCKWHEAT IN OHIO FOR TEN YEARS—Concluded.

Counties.	Number of Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Wood .....	1,245	382	473	408	1,285	760	40	423	2,726	555
Wyandot .....	59	616	96	89	66	89	127	251	442	251
Total product.....	208,918	209,094	212,238	188,529	224,475	109,651	115,727	225,068	179,642	173,206
Total area.....	13,752	12,670	12,002	11,908	13,338	7,886	8,617	11,920	14,278	10,408

Average area for 10 years, 11,673 acres.

Average product for 10 years, 18,660 bushels.



COMPARATIVE TABLE SHOWING PRODUCTION OF FLAXSEED IN OHIO FOR TEN YEARS.

Counties.	Number of Bushels.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....										
Allen .....			32						145	
Ashland .....	3,707	3,215	9,160	4,011	2,927	9,314	16,929	17,205	14,455	22,273
Ashabula .....				7						
Athens .....								2	7	
Auglaize .....			3				5			
Belmont .....							53			
Brown .....						15				
Butler .....		2	20			6				
Carroll .....	4				50					90
Champaign .....							10	170		27
Clark .....							28	45	646	
Clermont .....										
Clinton .....						12		100	108	
Columbiana .....	1					8				25
Coshocton .....					12	100	75	267	327	250
Crawford .....										
Cuyahoga .....										
Darke .....					78			282	482	100
Defiance .....		22	25				65			183
Deiaware .....							50			
Erie .....						8				
Fairfield .....							36			
Fayette .....				45	38	12				
Franklin .....						15	239	501	9	243
Fulton .....							10			
Gallia .....		3	30					50	10	5
Geauga .....	100						4		21	
Greene .....										
Guernsey .....								18	50	
Hamilton .....	20			100				85	733	
Hancock .....			12		24					
Hardin .....					432					
Harrison .....										
Henry .....		3	6	44			12		12	283
Highland .....	8	15	20			96	147	64	31	



Scioto	7	45	3	11	32	120	4	84
Seneca							448	5
Shelby		6		11	22			
Stark								
Summit								
Trumbull								
Tuscarawas	15			12				
Union	25		6					
Van Wert		23			150	90	100	20
Vinton								
Warren			15				90	
Washington				10				
Wayne	325	145	312	147	1,580	1,916	2,237	1,117
Williams								
Wood							38	76
Wyandot			3			36		
Total product	5,325	4,383	13,470	9,179	11,941	33,270	33,110	31,979

**Average product for 10 years, 19,678 bushels.**



Wayne .....	19,000	6,002	20,500	64,029	843,460	1,245,005	2,283,035	1,963,220	1,792,015	1,838,781
Totals.....	288,002	883,425	546,388	860,096	343,460	1,245,005	2,283,035	1,963,220	1,792,015	1,838,781

Average product for 10 years, 1,146,347 pounds.

COMPARATIVE TABLE SHOWING PRODUCTION OF BROOM CORN IN OHIO FOR TEN YEARS.

Counties.	Pounds of Broom Brush.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....	.....	2,500	1,635	.....	.....	600	600	350	15,305	1,800
Allen .....	.....	2,000	400	.....	.....	.....	2,000	2,000	1,100	.....
Ashtabula .....	.....	15	.....	.....	12	.....	.....	350	2,540	800
Athens .....	.....	.....	.....	.....	.....	.....	400	.....	.....	.....
Auglaize .....	200	200	500	300	1,080	3,000	3,500	3,090	150,375	86,110
Belmont .....	.....	.....	.....	.....	1,000	.....	1,388	1,125	4,121	2,000
Brown .....	2,300	.....	2,300	.....	.....	1,003	10,800	4,593	6,595	300
Butler .....	.....	800	4,000	9,500	6,302	6,000	3,400	6,550	61,050	6,000
Carroll .....	.....	.....	.....	.....	.....	.....	84	550	350	.....
Champaign .....	20,840	.....	4,000	.....	.....	6,000	30,200	16,100	56,800	345,305
Clark .....	.....	.....	.....	.....	.....	.....	.....	1,000	15,640	.....
Clermont .....	1,500	1,000	20	.....	.....	.....	2,200	2,300	6,225	.....
Columbiana .....	.....	.....	.....	.....	.....	.....	.....	.....	175	150
Coshocton .....	.....	.....	.....	.....	.....	.....	2,000	25	.....	100
Crawford .....	.....	.....	.....	.....	.....	.....	.....	625	315	.....
Cuyahoga .....	.....	.....	.....	.....	.....	.....	.....	40	.....	.....
Darke .....	1,675	3,000	3,700	7,500	10,450	6,000	100	28,700	71,070	39,160
Defiance .....	.....	1,200	2,100	1,500	750	.....	5,000	.....	6,000	.....
Delaware .....	.....	.....	.....	.....	.....	.....	.....	500	600	.....
Eric .....	.....	.....	.....	2,500	.....	.....	.....	2,500	3,000	.....
Fairfield .....	.....	.....	.....	.....	.....	.....	252	400	6,780	700
Fayette .....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Franklin .....	.....	.....	.....	2,000	400	1,600	13,100	6,540	19,060	3
Fulton .....	.....	.....	1,660	.....	4,000	.....	.....	7,071	9,042	6,950
Galla .....	.....	.....	.....	.....	100	3,200	700	4,000	2,025	5,495
Geauga .....	.....	.....	.....	.....	.....	50	.....	.....	.....	.....
Greene .....	.....	.....	800	.....	.....	.....	4,650	6,650	29,195	700
Guernsey .....	.....	.....	.....	.....	400	.....	400	900	1,400	680
Hamilton .....	.....	.....	.....	.....	.....	3,500	2,500	2,354	8,117	13,000
Hancock .....	.....	5,000	.....	.....	.....	.....	.....	6,000	16,020	83
Hardin .....	4,000	.....	.....	.....	.....	.....	60,000	800	5,720	.....
Harrison .....	.....	.....	.....	.....	.....	.....	.....	732	238	.....
Henry .....	.....	.....	.....	.....	.....	.....	.....	.....	435	1,200
Highland .....	.....	.....	.....	700	10,500	.....	6,200	8,430	9,500	3,110

[illegible]

COMPARATIVE TABLE SHOWING PRODUCTION OF BROOM CORN IN OHIO FOR TEN YEARS—Concluded.

Counties.	Pounds of Broom Brush.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Wood .....	.....	.....	.....	.....	.....	.....	.....	3,200	1,900	.....
Wyandot .....	.....	.....	.....	.....	.....	.....	.....	.....	2,000	.....
Total product.....	50,296	128,245	67,623	80,910	85,649	138,483	238,080	301,563	1,067,693	669,475
Total area.....	206	191	157	220	278	227	6,896	726	2,228	907

Average area for 10 years, 1,201 acres.  
 Average product for 10 years, 286,801 pounds.



COMPARATIVE TABLE SHOWING USE OF COMMERCIAL FERTILIZERS FOR TEN YEARS.

Counties.	Pounds used.									
	1905.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams	4,788,520	3,965,560	4,037,723	3,972,460	3,508,900	3,311,023	3,211,435	2,919,220	2,921,140	3,574,714
Allen	512,700	441,900	582,600	582,600	289,100	415,800	388,000	328,400	340,500	443,040
Ashtabula	3,172,617	3,108,338	3,879,650	3,889,710	2,977,070	2,842,700	2,837,610	2,191,350	2,197,820	2,697,880
Athens	6,389,740	7,546,864	5,689,479	5,818,727	5,680,770	6,877,065	6,476,807	4,419,249	4,419,249	4,290,060
Auglaize	1,063,900	1,190,440	1,148,415	1,463,600	1,694,378	835,500	835,500	1,103,541	1,626,972	1,790,700
Belmont	1,133,850	910,580	1,048,850	799,160	714,300	1,128,900	833,550	344,210	183,990	384,460
Berkshire	1,543,777	1,448,850	1,810,741	1,954,380	1,489,130	1,817,200	2,064,885	1,794,244	2,221,540	1,913,436
Brown	2,850,531	3,216,357	2,664,350	2,833,070	2,707,060	1,965,797	1,934,785	1,627,582	1,717,572	4,079,375
Butler	1,605,150	1,834,850	1,746,550	1,903,085	935,300	750,050	995,900	817,940	185,405	1,064,300
Carroll	2,072,910	1,943,687	1,972,819	2,008,600	1,762,700	1,666,350	1,671,900	1,556,340	1,177,753	1,678,730
Champaign	2,002,220	2,604,650	3,079,913	2,037,400	1,655,960	2,723,700	2,675,150	1,844,200	1,586,350	2,691,482
Clark	1,981,330	2,157,050	3,694,675	2,147,450	1,768,500	1,683,000	1,597,200	998,350	883,970	1,341,070
Clermont	1,880,067	2,757,710	2,064,088	1,582,811	2,083,438	1,220,237	1,328,060	1,160,755	1,040,330	1,205,660
Columbiana	3,853,590	4,066,425	3,978,372	3,896,685	4,131,798	3,543,110	3,171,208	3,182,900	3,721,414	3,987,290
Coshocton	2,982,290	2,126,965	3,184,580	2,098,700	2,404,250	1,915,230	1,703,270	1,457,685	1,230,765	1,891,700
Crawford	3,614,000	4,021,260	4,357,980	5,690,400	4,874,950	3,995,200	3,287,208	3,318,523	1,367,220	1,611,020
Cuyahoga	2,735,240	2,777,800	3,222,067	2,219,385	1,404,464	1,561,600	1,369,520	716,975	1,967,470	4,470,300
Darke	343,900	350,300	318,380	325,100	213,360	188,700	165,060	90,600	76,500	1,997,157
Delaware	1,539,300	1,617,622	1,932,370	1,760,942	1,343,130	1,160,280	1,007,520	1,043,065	978,863	1,189,360
Erle	2,294,175	2,011,700	2,227,503	2,300,900	1,870,990	2,104,000	1,271,300	1,231,900	1,460,360	1,460,360
Fairfield	5,710,000	5,777,706	6,344,300	5,488,710	4,887,560	5,101,710	4,841,820	2,879,020	2,879,480	4,186,160
Fayette	2,584,120	3,098,120	3,174,761	2,571,150	2,947,760	2,568,300	2,943,200	2,626,115	1,450,100	1,829,460
Franklin	1,817,500	1,750,560	1,838,775	2,000,563	2,113,340	2,479,900	1,471,623	922,630	665,400	723,500
Fuller	827,455	696,503	537,570	206,250	132,600	109,560	76,900	93,600	147,435	136,380
Gallia	1,230,965	1,307,475	1,707,500	1,674,120	1,342,106	1,122,860	1,119,100	1,025,230	2,051,790	2,318,660
Greene	3,464,130	3,419,350	3,440,965	3,403,985	3,068,900	2,709,860	2,889,500	2,676,400	2,676,400	2,676,425
Guernsey	1,471,310	1,576,444	1,588,830	1,883,699	2,013,250	1,953,960	1,682,900	738,900	622,100	869,250
Hamilton	341,500	415,312	403,800	370,146	1,381,710	1,565,375	1,307,885	1,601,353	1,503,190	2,069,340
Hancock	862,732	987,907	1,000,500	880,640	648,675	666,000	805,600	615,350	456,250	788,900
Harrison	1,038,630	581,525	623,900	1,901,460	648,800	316,481	575,700	357,850	415,700	297,300
Hartsville	54,975	600,916	768,600	701,440	892,385	886,700	886,700	659,001	674,300	674,300
Henry	647,315	659,870	212,600	1,066,750	701,440	74,900	154,810	93,652	82,150	72,240
HIGHLAND	5,678,210	6,689,598	6,039,940	5,953,550	5,537,290	6,835,633	4,596,340	3,679,770	2,868,200	3,300,760

COMPARATIVE TABLE SHOWING USE OF COMMERCIAL FERTILIZERS FOR TEN YEARS—Concluded.

Counties.	Pounds Used.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Hocking	2,064,420	2,180,980	1,746,705	2,292,700	2,013,510	1,751,007	1,719,876	1,618,250	1,578,385	2,357,840
Holmes	3,753,040	2,485,124	2,872,125	2,708,125	2,106,470	1,894,100	1,849,383	1,746,250	1,702,830	1,702,830
Huron	6,649,980	6,063,190	6,848,380	6,084,000	4,934,470	3,899,270	4,200,410	3,373,021	3,680,960	4,083,079
Jackson	1,631,110	1,602,833	2,434,340	1,651,150	1,356,300	1,384,600	1,317,040	1,582,400	2,004,319	2,880,320
Jefferson	1,233,235	1,275,375	1,408,310	1,346,250	1,339,650	1,440,190	1,317,610	1,087,460	1,084,450	1,151,650
Knox	2,980,413	2,976,570	3,106,940	3,106,560	3,106,420	3,080,120	2,402,070	2,890,350	2,689,220	3,224,630
Lake	1,716,102	2,246,120	2,283,450	1,734,000	2,073,633	1,947,735	1,435,206	1,730,800	1,130,500	1,743,780
Lawrence	155,000	168,864	547,800	537,377	175,020	369,800	315,006	554,860	520,627	554,190
Licking	4,132,641	4,150,510	3,744,580	3,992,244	3,006,280	3,262,650	3,081,560	2,833,960	2,830,487	3,853,490
Logan	859,575	914,280	1,229,450	933,300	1,141,470	1,368,960	1,276,300	661,560	682,500	1,213,966
Lorain	4,259,650	4,250,937	5,002,200	4,690,065	3,869,376	5,895,890	3,567,700	3,646,110	2,672,400	2,123,966
Lucas	671,393	554,701	471,963	441,140	384,060	138,500	106,280	72,400	117,100	250,510
Madison	594,850	756,350	510,800	533,320	290,600	370,800	699,064	217,000	3,286,717	173,945
Marion	5,156,510	5,074,275	4,410,034	4,313,440	4,140,875	3,545,154	4,011,274	3,976,690	3,286,717	2,674,465
Marion	976,925	1,027,625	878,135	764,500	610,900	462,100	99,530	320,215	266,900	331,100
Medina	7,136,001	7,061,271	7,533,000	7,080,500	7,252,800	6,036,900	5,632,950	5,065,496	5,248,260	6,681,380
Melms	1,862,175	1,875,225	1,785,250	1,949,140	1,717,550	1,698,810	1,686,792	2,395,113	2,616,860	2,762,690
Mercer	862,400	882,700	1,477,500	861,470	576,560	349,000	320,300	231,200	184,500	173,150
Miami	2,356,850	3,216,290	3,215,175	2,653,720	1,953,129	1,677,300	2,007,400	1,453,830	1,673,080	2,298,280
Monroe	1,538,640	1,798,400	2,475,300	2,196,710	2,156,660	2,063,550	2,277,100	1,735,100	1,527,468	4,850,551
Montgomery	5,094,300	5,038,470	4,494,200	4,084,028	3,400,750	3,612,400	3,584,425	2,696,660	1,915,300	3,353,597
Morgan	1,990,625	1,355,714	2,393,212	2,473,405	2,220,632	1,923,300	2,196,700	1,935,000	1,816,257	2,368,800
Morrow	3,257,630	3,240,866	3,232,802	3,384,584	3,969,866	2,796,490	2,810,680	1,696,020	2,255,210	2,746,410
Muskingum	3,152,300	3,009,267	3,685,130	3,468,661	3,830,040	2,908,100	2,874,550	2,632,780	2,629,010	3,513,910
Noble	1,042,510	1,081,050	1,385,165	1,273,370	1,144,560	1,104,354	1,426,926	984,400	1,259,315	1,259,315
Ottawa	20,000	8,150	5,000	8,500	8,200	2,000	8,000	2,200	3,800	5,700
Paulding	67,355	53,300	15,000	3,500	5,000	5,000	.....	.....	2,190	1,700
Perry	4,271,725	4,271,355	4,271,355	3,530,477	3,740,720	3,543,217	3,523,820	2,988,770	2,664,900	3,835,460
Pickaway	5,881,096	5,088,005	4,714,300	4,764,570	3,380,040	3,236,967	3,746,290	1,962,860	1,924,100	1,924,100
Pike	2,682,060	2,986,061	2,911,670	2,774,405	2,497,459	1,633,920	2,434,970	1,715,964	1,919,798	2,773,350
Portage	5,114,174	4,894,930	4,930,950	5,522,960	5,539,405	5,043,600	4,779,116	5,123,260	4,257,770	5,635,760
Preble	7,127,340	7,193,310	6,623,200	6,623,200	6,490,775	6,003,630	6,472,252	5,240,950	4,083,285	5,992,850
Putnam	34,516	33,300	23,600	34,400	25,400	5,500	21,750	9,500	2,800	2,800
Richland	4,304,842	4,671,066	4,163,560	3,784,390	3,652,310	2,979,240	2,849,150	2,645,961	3,640,465	3,640,465
Ross	4,143,355	4,660,900	6,363,010	3,533,250	2,732,550	3,126,759	3,655,357	2,127,550	1,751,200	3,069,580
Sandusky	2,259,660	3,383,125	1,572,901	1,381,660	1,081,300	920,880	780,880	300,782	1,180,900	653,700
Scioto	2,216,300	2,635,760	2,716,465	2,943,401	2,861,490	2,620,690	2,570,700	3,082,974	2,886,000	3,033,800
Seneca	5,781,620	6,361,250	6,711,278	7,782,279	4,312,000	4,194,660	4,013,286	3,265,960	2,196,460	3,666,364

Shelby .....	2,293,100	1,821,880	1,927,070	1,392,200	1,407,913	1,164,850	1,417,250	690,079	652,200	1,478,300
Stark .....	6,509,581	6,061,675	5,863,830	5,906,001	5,775,427	4,560,680	4,224,185	3,869,947	3,301,760	3,253,025
Summit .....	3,811,600	3,637,900	4,132,780	4,067,641	3,769,550	3,497,400	3,020,780	3,678,950	3,207,000	3,445,990
Trumbull .....	3,489,180	3,434,729	4,036,280	3,795,737	3,953,256	5,072,139	3,218,700	3,532,714	3,322,727	3,251,152
Tuscarawas .....	1,736,720	1,800,204	1,931,076	1,975,810	1,675,091	1,554,318	1,564,780	1,380,500	1,095,122	1,706,576
Union .....	738,700	758,345	1,116,400	830,860	740,600	777,300	511,196	234,100	455,005	1,579,575
Van Wert .....	24,900	117,200	115,400	117,200	1,400	1,115,500	1,103,500	1,103,500	2,000	1,997,590
Vinton .....	1,163,200	1,075,100	919,590	1,038,900	1,030,000	1,398,140	1,389,350	828,548	65,200	1,953,600
Warren .....	2,329,455	2,804,000	2,511,450	2,555,770	2,025,450	2,456,730	2,400,897	2,456,070	3,997,240	5,370,510
Washington .....	3,505,650	3,780,807	4,133,757	4,223,613	3,953,652	6,537,870	6,909,825	6,038,662	6,585,202	5,518,148
Wayne .....	8,887,122	8,341,923	8,103,288	9,711,368	8,194,470	104,200	83,300	123,200	79,235	235,000
Williams .....	866,300	642,057	967,625	331,470	137,000	387,120	232,800	368,120	403,500	725,940
Wood .....	821,423	787,425	634,420	483,200	223,200	1,045,310	1,027,460	696,400	643,900	710,500
Wyandot .....	1,665,080	1,778,500	2,011,950	1,723,460	1,207,725	1,045,310	1,027,460	696,400	643,900	710,500
Totals .....	222,517,524	236,042,803	242,707,109	230,615,338	202,709,698	189,887,217	182,894,581	153,816,702	149,752,554	178,926,948
Total cost .....	\$3,764,483	\$2,483,627	\$2,429,752	\$2,228,190	\$1,932,792	\$1,784,788	\$1,764,445	\$1,665,610	\$1,483,290	\$2,299,136

Average number of pounds for 10 years, 199,984,063.  
 Average cost for 10 years, \$2,178.331.

COMPARATIVE TABLE SHOWING PRODUCTION OF WOOL IN OHIO FOR TEN YEARS.

Counties.	Pounds Shorn.									
	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Adams .....	31,327	28,481	26,581	29,572	25,560	28,105	34,170	38,247	44,800	43,672
Allen .....	99,592	96,624	81,817	71,427	64,999	62,862	63,961	56,797	127,746	104,950
Ashland .....	214,881	222,846	214,109	187,791	145,780	206,233	190,290	212,363	202,334	246,065
Ashtabula .....	46,418	44,583	39,415	32,962	39,366	42,671	53,096	60,933	84,139	86,941
Athens .....	298,875	249,044	233,169	227,565	240,263	194,092	223,510	266,629	241,937	271,610
Aug. aize .....	45,277	39,549	25,210	23,150	28,713	33,604	41,392	51,515	52,137	51,537
Belmont .....	435,423	440,090	402,539	415,601	340,071	407,696	340,596	380,797	507,023	426,590
Brown .....	38,014	32,941	38,357	31,768	32,945	33,552	35,737	52,797	58,980	60,240
Butler .....	45,759	42,659	41,903	37,798	30,436	35,948	38,296	37,169	46,408	36,797
Carroll .....	373,191	343,026	288,975	306,014	214,190	293,840	286,676	336,840	329,046	343,829
Champaign .....	116,163	103,791	121,905	136,434	84,601	93,830	89,522	119,319	128,017	126,343
Clark .....	107,852	133,009	115,733	116,091	107,296	355,472	99,579	114,949	112,222	99,718
Clermont .....	17,211	16,472	17,113	11,095	13,976	12,079	19,053	28,775	34,340	38,691
Columbiana .....	109,897	96,223	78,560	92,153	99,304	98,868	104,628	112,815	138,618	122,760
Coshocton .....	143,688	142,715	141,325	130,614	125,685	112,175	127,708	167,791	189,436	181,402
Crawford .....	700,125	613,491	578,128	605,458	623,301	605,728	456,812	473,131	446,601	432,255
Cuyahoga .....	305,598	301,181	294,326	240,193	227,544	214,644	203,256	220,268	228,378	177,393
Darke .....	21,505	25,957	23,985	20,982	21,391	22,705	29,586	28,467	26,949	30,982
Defiance .....	23,123	25,221	22,298	28,824	36,473	62,952	70,452	51,171	39,620	38,860
Delaware .....	114,121	85,382	76,069	78,008	78,404	68,482	70,452	78,156	80,593	76,257
Erle .....	242,917	262,142	239,086	218,086	214,661	151,386	224,553	243,246	230,806	262,780
Fairfield .....	92,948	82,882	68,234	65,081	65,366	62,225	69,474	67,367	64,621	87,612
Fayette .....	29,057	30,733	22,880	33,246	30,328	36,189	26,968	49,860	61,171	33,199
Franklin .....	66,038	58,023	48,644	37,305	32,632	42,361	60,781	49,968	43,265	52,690
Fulton .....	68,787	72,162	78,679	74,111	79,896	70,011	106,710	119,624	119,624	102,142
Galla .....	65,131	61,288	61,313	64,367	34,063	36,698	43,173	63,338	67,637	61,700
Gauga .....	24,874	24,000	23,756	19,068	19,823	27,636	39,415	49,863	63,296	63,862
Greene .....	122,596	119,697	106,096	92,827	100,203	98,246	98,246	123,988	104,916	107,164
Gurney .....	466,010	442,370	412,323	417,606	386,649	383,806	443,275	446,661	446,661	432,097
Hamilton .....	7,770	7,943	6,204	5,460	6,843	6,210	3,039	6,905	6,980	3,879
Hancock .....	210,575	210,253	198,140	201,051	198,069	167,824	170,155	216,779	197,056	192,638
Hardin .....	109,094	145,676	133,128	133,325	130,461	137,012	137,012	141,815	148,254	148,254
Harrison .....	67,166	728,078	684,147	624,636	626,140	676,202	674,998	596,546	570,576	640,864
Henry .....	37,686	34,448	36,814	32,947	30,745	33,062	38,548	44,734	47,672	44,734
Highland .....	80,961	68,430	58,300	56,405	59,008	54,992	75,960	115,613	103,851	110,728

Hoeking .....	89,847	78,724	89,543	75,603	76,656	77,642	69,505	88,924	76,176	87,109
Holmes .....	160,191	151,806	146,882	81,647	80,997	82,173	88,410	107,969	118,367	123,163
Huron .....	431,177	392,370	338,768	346,730	321,771	317,839	321,521	351,575	353,015	354,720
Jackson .....	14,420	17,004	14,146	13,404	18,617	24,189	26,619	35,414	32,678	41,820
Jencks .....	297,339	267,214	274,029	203,201	264,183	270,873	279,106	324,003	313,546	336,648
Knox .....	578,111	567,155	675,476	675,251	674,802	677,670	631,337	636,745	637,947	603,681
Lake .....	22,011	13,395	16,892	14,344	11,573	18,063	14,909	20,708	20,708	25,981
Lawrence .....	4,271	3,379	2,876	3,082	3,163	3,223	5,931	6,772	9,440	6,681
Licking .....	680,207	585,204	603,352	562,815	545,833	566,531	594,251	519,917	445,793	534,616
Logan .....	171,349	171,349	170,319	163,250	148,063	151,867	159,044	175,388	148,441	206,580
Lorain .....	93,447	97,879	99,020	95,899	78,446	94,764	106,101	130,316	128,608	118,142
Lucas .....	8,665	11,723	8,978	8,318	10,228	8,314	9,639	10,971	14,342	15,618
Madison .....	86,524	74,244	64,503	70,527	70,527	49,084	55,779	61,536	101,883	100,951
Manhaling .....	115,129	105,090	99,967	85,491	86,367	98,461	83,723	111,351	122,254	115,545
Marion .....	297,719	290,312	283,012	239,992	237,484	260,585	272,410	372,143	360,073	330,818
Medina .....	132,266	160,300	136,307	110,446	111,689	122,864	121,472	167,779	180,371	181,775
Meigs .....	168,942	185,682	135,471	105,730	141,077	125,147	118,427	155,792	138,332	143,300
Mercer .....	42,721	53,982	40,118	39,942	40,613	45,935	47,953	63,354	61,771	58,840
Miami .....	7,601	10,435	9,674	6,340	6,470	7,357	10,239	17,065	19,239	18,179
Monroe .....	70,225	52,853	50,508	51,292	54,732	56,006	60,734	77,222	87,280	94,018
Montgomery .....	9,953	11,701	8,463	9,063	6,936	6,960	9,999	8,219	9,392	11,771
Morgan .....	517,348	463,306	411,225	382,655	375,818	330,456	357,027	404,740	409,007	330,376
Morrow .....	477,346	451,811	472,124	428,241	390,846	423,541	389,462	367,592	348,607	370,108
Muskingum .....	640,367	573,136	581,551	491,537	487,430	461,196	459,276	541,340	500,592	468,708
Noble .....	415,445	397,615	330,549	313,637	293,441	280,159	298,046	343,622	297,775	302,211
Ottawa .....	31,900	36,935	35,063	25,628	24,267	29,454	28,681	27,804	24,397	23,936
Paiding .....	54,714	49,471	37,026	33,261	32,860	30,370	33,192	47,429	40,518	35,963
Perry .....	19,432	174,354	135,446	131,760	129,108	133,946	128,001	161,056	153,238	144,170
Pickaway .....	29,413	33,024	33,024	33,700	27,346	30,643	51,701	40,489	60,416	69,604
Pike .....	15,368	13,972	13,735	13,865	17,294	10,007	13,967	16,683	20,212	16,311
Portage .....	101,811	93,127	90,938	76,791	81,813	89,933	99,099	120,195	141,814	126,666
Preble .....	24,434	23,587	19,946	20,784	23,581	19,060	20,686	26,399	32,247	34,675
Putum .....	45,053	49,106	49,046	55,104	42,325	46,510	60,618	67,430	64,464	43,257
Richland .....	256,911	225,040	225,625	202,193	216,996	182,676	180,113	206,737	192,630	192,336
Ross .....	39,351	35,049	46,853	27,277	13,874	26,820	30,261	32,291	46,461	67,999
Sandusky .....	72,308	72,312	57,758	69,511	63,532	79,734	74,499	75,898	81,806	82,044
Seneca .....	1,841	2,218	2,453	3,912	4,725	6,018	5,025	7,225	5,511	5,554
Shelby .....	263,501	246,874	255,550	226,792	168,573	179,776	192,198	522,633	182,681	177,127
Shelby .....	27,063	24,946	23,334	16,759	22,383	20,899	26,383	39,876	39,859	40,450
Stark .....	87,173	86,301	79,095	72,860	76,766	80,752	85,235	102,874	117,936	124,765
Summit .....	26,333	23,109	22,935	22,935	23,682	29,015	34,360	49,286	45,532	40,961
Trumbull .....	79,310	66,035	66,345	66,091	67,197	71,316	80,880	109,574	137,088	134,121
Tuscarawas .....	167,641	156,970	156,970	145,132	142,171	144,613	143,737	158,922	158,758	158,450
Union .....	225,197	225,916	231,553	239,405	150,463	182,622	178,228	216,262	252,422	252,370
Van Wert .....	68,406	68,066	61,738	61,107	58,084	41,512	63,594	72,707	83,240	67,674
Vinton .....	105,565	93,609	77,946	78,648	79,719	92,981	96,741	105,460	90,783	90,682
Warren .....	33,317	23,948	20,506	25,682	20,622	27,879	34,353	46,396	50,783	64,112
Washington .....	218,888	197,620	180,076	157,147	141,076	144,973	162,764	191,940	101,682	198,706
Wayne .....	108,020	101,832	103,341	95,464	89,838	90,103	127,773	127,400	131,081	126,543
Williams .....	140,196	164,360	184,642	164,597	151,351	164,225	174,532	153,305	157,452	153,175

COMPARATIVE TABLE SHOWING PRODUCTION OF WOOL IN OHIO FOR TEN YEARS—Concluded.

Counties.	Pounds Shorn.									
	1978.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.	1899.
Wood .....	64,566	53,902	46,845	43,481	45,447	52,661	61,112	71,556	99,065	76,379
Wyandot .....	366,974	337,322	338,809	326,206	323,912	320,515	413,367	326,363	313,215	331,047
Totals .....	13,752,069	13,394,168	12,789,451	11,828,237	11,428,576	11,762,687	11,681,242	13,512,413	12,992,942	13,017,062

Average for 10 years, 12,615,467 pounds.

TABLE SHOWING THE NUMBER OF HORSES IN OHIO FOR TEN YEARS, INCLUDING CITIES AND RURAL DISTRICTS.

Counties.	Number of Horses.									
	1909.	1908.	1907.	1906.	1906.	1906.	1904.	1903.	1902.	1901.
Adams	5,281	5,368	4,802	4,863	4,804	4,723	4,641	4,809	4,927	4,822
Allen	19,111	19,003	9,494	7,360	9,429	9,945	9,067	8,981	8,638	8,727
Ashland	7,386	7,377	7,311	7,360	7,471	7,768	7,671	7,780	7,020	7,104
Ashabula	10,101	10,282	9,138	9,323	9,614	9,609	9,906	9,186	9,027	9,063
Athens	4,166	4,704	4,634	4,705	4,486	4,668	4,438	4,375	4,352	4,170
Auglaize	8,941	8,976	8,948	9,117	8,729	8,626	8,641	8,701	8,489	8,178
Belmont	8,543	8,495	8,296	8,403	8,112	8,094	8,608	8,597	8,689	7,561
Brown	7,160	7,342	6,592	6,592	6,362	6,459	6,420	6,542	6,504	6,714
Butler	11,027	11,147	11,367	11,107	10,784	10,435	10,440	10,447	10,092	10,360
Carroll	4,531	4,261	4,128	4,020	4,340	4,521	4,365	4,197	4,301	4,407
Champaign	11,116	11,032	10,381	10,623	10,640	10,400	10,463	10,429	10,102	10,143
Clark	11,834	11,440	11,329	11,485	11,743	10,915	10,899	10,683	11,171	11,412
Clermont	7,087	7,017	6,983	7,352	6,746	6,431	6,606	6,593	6,867	7,078
Columbiana	10,013	9,895	9,599	9,486	9,347	9,459	9,568	9,356	9,890	9,839
Coshocton	6,703	6,587	6,587	6,582	6,127	5,720	5,968	5,814	5,763	6,013
Crawford	8,723	8,683	8,832	8,835	8,768	8,647	8,713	8,621	8,614	8,391
Cuyahoga	16,819	17,478	15,641	18,563	18,858	17,424	17,598	18,032	21,335	18,168
Darke	18,757	18,081	17,535	17,375	17,150	16,947	16,534	15,617	15,691	15,044
Defiance	7,295	7,075	6,933	6,826	6,582	6,078	6,352	6,261	6,131	5,812
Delaware	8,956	8,676	8,081	7,695	8,176	8,139	7,727	7,700	7,392	6,881
Erie	5,782	5,843	5,849	5,610	5,596	5,424	5,660	5,560	5,674	5,497
Fairfield	10,926	10,478	10,203	10,232	10,223	9,761	9,665	9,591	9,465	9,689
Fayette	10,082	10,323	9,767	9,550	9,486	9,083	9,298	8,979	8,888	9,059
Franklin	14,174	14,170	14,956	15,329	14,978	14,808	14,804	14,165	14,613	14,571
Gallia	7,483	7,490	7,154	6,847	6,960	6,882	7,263	7,352	7,744	6,915
Geauga	4,584	4,543	4,514	4,543	4,474	4,486	4,520	4,690	5,178	5,232
Greene	5,579	5,623	5,303	5,180	5,102	5,134	5,248	5,262	5,268	5,388
Guernsey	10,657	10,067	10,023	9,996	10,028	9,663	9,757	9,673	9,604	9,589
Hamilton	5,525	5,513	5,244	5,244	5,007	4,928	5,094	5,453	5,210	5,359
Hancock	15,455	15,923	16,143	16,575	16,115	16,438	16,493	16,635	17,040	16,847
Hardin	10,462	9,920	9,933	10,394	10,498	10,863	10,468	10,336	10,149	10,235
Harrison	4,700	4,473	4,900	4,998	5,052	4,854	4,988	4,694	4,680	4,741
Henry	8,185	7,682	7,478	7,391	7,167	6,834	7,065	6,967	6,728	6,578
HIGHLAND	8,966	8,796	8,632	8,371	8,380	8,166	8,437	8,638	8,379	8,177
Hocking	3,769	3,663	3,800	3,841	3,571	3,583	3,563	3,566	3,537	3,767

TABLE SHOWING THE NUMBER OF HORSES IN OHIO FOR TEN YEARS, INCLUDING CITIES AND RURAL DISTRICTS—Concluded.

Counties	Number of Horses.									
	1900.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Holmes .....	6,989	7,173	6,874	7,150	6,825	7,292	7,132	6,786	6,584	6,807
Huron .....	8,007	8,500	8,437	8,546	8,111	8,217	7,855	7,877	7,871	10,066
Jackson .....	3,333	3,385	3,233	3,405	3,213	3,214	3,441	3,603	3,606	3,690
Jefferson .....	5,767	5,897	5,682	5,713	5,661	5,680	5,686	5,689	5,480	5,701
Knox .....	8,321	8,328	8,332	8,170	8,168	7,873	7,735	7,143	6,933	7,683
Lake .....	4,498	4,540	4,714	4,740	4,476	4,412	4,428	4,205	4,346	4,265
Lawrence .....	3,559	3,556	3,403	3,716	3,535	3,805	3,767	3,869	3,730	3,647
Licking .....	13,110	12,827	13,135	13,247	12,272	13,646	12,378	12,188	12,099	12,193
Logan .....	10,968	10,384	9,577	10,082	9,876	9,276	9,768	9,555	9,187	9,198
Lorain .....	10,040	10,135	9,533	9,853	9,410	9,132	9,172	9,101	8,938	8,803
Lucas .....	8,543	8,514	8,653	9,063	8,529	9,504	9,644	9,761	9,773	9,549
Madison .....	10,484	10,440	10,341	9,688	9,478	9,501	9,644	9,470	9,116	8,973
Mahoning .....	8,229	10,271	9,040	8,711	6,653	8,876	8,515	8,207	8,144	8,515
Marion .....	7,958	7,995	7,945	7,933	7,761	7,556	8,179	7,339	7,204	7,168
Medina .....	8,771	8,411	8,635	9,023	9,035	8,449	7,683	8,033	8,195	8,108
Melms .....	4,175	4,176	4,009	4,280	4,261	4,505	4,603	4,792	5,028	5,197
Meigs .....	10,810	10,573	10,259	10,365	9,794	9,698	9,430	9,217	8,769	8,402
Miami .....	12,118	11,785	11,704	11,725	10,689	11,328	11,542	11,175	10,684	11,395
Monroe .....	4,392	4,399	4,637	5,042	4,925	5,036	5,288	5,030	5,464	5,174
Montgomery .....	16,543	15,883	16,154	15,007	15,719	15,698	16,140	15,117	16,156	15,310
Morgan .....	4,590	4,619	4,369	4,690	4,513	4,578	4,580	4,867	4,751	4,659
Morley .....	8,176	7,939	7,911	7,713	7,503	7,350	7,358	7,270	7,253	7,734
Muskingum .....	8,703	8,938	9,004	9,032	9,000	9,092	9,903	9,204	8,928	9,987
Noble .....	4,557	4,542	4,118	4,555	4,440	4,292	4,583	4,602	4,256	4,048
Ottawa .....	5,245	5,245	5,437	5,363	5,370	5,561	5,395	5,653	5,155	5,113
Paidung .....	7,097	6,937	6,600	6,444	6,436	6,478	6,824	6,681	5,093	5,173
Perry .....	6,258	6,106	6,063	6,097	6,097	6,770	6,824	6,681	5,093	5,173
Pickaway .....	11,121	10,671	10,431	9,804	9,602	9,602	9,302	9,323	9,294	9,561
Pike .....	3,896	3,999	3,996	4,044	4,032	3,813	3,947	3,812	3,857	4,236
Portage .....	9,527	8,749	8,877	9,338	8,650	8,622	8,079	8,172	7,914	7,884
Preble .....	10,945	10,635	10,521	10,325	9,972	9,972	9,937	9,860	9,960	9,874
Punam .....	9,446	9,136	9,417	9,688	8,874	8,967	8,953	8,572	9,269	8,161
Richland .....	9,677	9,460	9,248	9,064	9,225	8,935	8,909	8,909	8,833	8,594
Ro-s .....	10,815	10,255	10,514	9,065	9,959	10,278	10,255	9,982	9,990	10,522
Sandusky .....	8,863	8,909	9,166	8,413	8,618	8,668	8,686	8,376	7,984	8,434
Scioto .....	5,657	5,429	5,365	5,467	5,449	5,468	5,314	5,375	5,251	5,593
Seneca .....	10,367	11,704	10,214	10,071	10,001	9,484	9,207	9,202	8,788	9,145
Shelby .....	9,730	9,506	9,286	9,018	8,975	9,014	9,157	9,034	8,624	8,695



Stark .....	14,621	14,848	14,836	16,262	13,131	14,501	14,836	14,564	14,429	14,569
Summit .....	9,485	9,596	9,543	9,686	9,493	8,129	8,886	9,108	9,183	9,073
Trumbull .....	10,120	10,080	10,260	10,687	11,309	10,229	10,463	10,325	10,089	10,594
Tuscarawas .....	8,070	8,424	8,470	8,813	8,072	7,350	7,417	7,282	7,772	7,264
Union .....	9,177	8,651	8,282	8,452	8,067	8,469	8,190	8,023	7,692	7,630
Van Wert .....	9,787	9,296	8,964	8,729	8,651	8,422	8,184	8,748	8,345	8,250
Vinton .....	2,507	2,507	2,362	2,898	2,290	2,295	2,347	2,407	2,376	2,504
Warren .....	9,425	9,279	8,704	9,299	9,403	9,439	9,650	9,238	9,274	9,143
Washington .....	7,013	6,949	7,010	6,354	6,942	7,120	7,107	7,339	7,605	7,692
Wayne .....	12,506	12,285	11,514	12,220	12,191	12,267	11,911	11,500	11,063	10,821
Williams .....	7,114	7,353	7,350	7,238	7,447	6,931	6,579	6,489	6,165	6,268
Wood .....	11,701	11,145	11,025	11,265	11,565	11,278	10,808	11,744	10,874	11,268
Wyandot .....	8,747	7,939	7,902	8,006	8,078	7,705	7,407	7,534	7,339	7,150
Totals .....	755,082	755,351	744,119	746,016	730,156	728,204	725,024	716,553	712,500	711,146

TABLE SHOWING THE NUMBER OF CATTLE IN OHIO FOR TEN YEARS, INCLUDING CITIES AND RURAL DISTRICTS.

Counties.	Number of Cattle.									
	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Adams .....	8,962	9,366	9,197	9,900	10,346	10,467	10,615	10,432	10,603	10,384
Allen .....	15,435	15,208	15,732	16,496	16,014	15,690	17,614	15,799	14,861	15,177
Ashtabula .....	12,198	13,750	13,564	13,067	14,476	16,768	15,349	14,650	14,825	14,726
Ashland .....	27,170	26,110	27,369	29,290	30,886	32,186	32,201	28,882	30,024	28,448
Athens .....	9,310	9,019	16,135	9,933	9,697	10,069	10,370	11,070	10,320	11,217
Auglaize .....	15,912	16,155	16,369	17,237	16,426	16,972	17,168	16,282	15,901	15,224
Belmont .....	18,247	18,021	17,587	17,847	17,981	17,221	18,208	19,550	20,749	21,850
Brown .....	11,808	11,143	10,472	11,263	12,159	12,864	12,897	12,970	13,407	13,112
Butler .....	14,699	15,733	16,053	16,300	15,967	16,820	17,011	16,622	16,465	15,591
Carroll .....	11,524	11,566	11,248	11,626	12,030	12,939	13,654	12,941	13,009	13,248
Champaign .....	16,746	16,224	15,486	18,711	17,943	18,297	20,268	20,020	18,696	17,928
Clark .....	17,431	17,106	17,350	19,061	17,798	18,474	19,469	18,281	19,920	18,453
Clermont .....	11,354	11,195	11,008	11,089	10,331	9,987	10,435	10,687	9,761	10,567
Columbiana .....	12,856	13,621	13,869	15,615	16,604	15,967	17,250	16,390	17,067	15,540
Coshocton .....	19,357	19,096	19,111	20,294	19,835	21,727	21,859	20,501	22,507	22,072
Crawford .....	14,791	15,767	16,433	16,313	16,213	16,796	18,306	17,531	16,008	16,728
Cuyahoga .....	19,173	15,290	15,906	17,274	16,837	16,164	17,080	16,532	16,837	17,348
Darke .....	12,118	12,532	13,487	14,713	16,869	15,977	16,615	16,247	16,322	15,631
Defiance .....	23,462	22,901	23,931	25,104	23,671	25,269	26,928	25,889	24,319	23,039
Delaware .....	10,812	10,496	10,696	11,343	11,614	10,353	10,519	11,816	11,284	9,967
Erie .....	18,065	17,640	17,265	17,522	19,047	20,074	21,196	19,133	17,362	16,669
Fairfield .....	7,176	6,991	7,213	7,515	7,732	7,762	8,418	7,911	7,902	7,673
Fayette .....	19,801	19,947	20,381	21,590	21,538	21,140	22,346	21,930	20,796	21,366
Franklin .....	15,164	23,637	17,500	21,673	19,785	18,739	20,070	19,819	19,719	20,077
Fulton .....	18,345	18,943	19,779	20,845	20,242	20,789	21,037	19,672	19,672	18,662
Gallia .....	18,626	17,193	17,179	16,738	16,313	17,694	18,060	17,661	17,676	14,536
Geauga .....	9,935	9,781	9,960	9,400	9,843	10,366	11,491	11,741	13,179	11,966
Greene .....	19,031	18,741	19,747	20,135	20,626	21,471	21,650	21,569	21,569	20,263
Guernsey .....	14,996	14,935	15,088	15,519	18,523	18,966	18,678	18,678	17,622	17,126
Hamilton .....	11,453	12,719	12,137	13,403	13,467	13,161	13,983	13,983	13,948	16,351
Hancock .....	14,389	15,454	15,200	16,466	16,636	17,739	17,907	17,700	18,796	17,461
Hardin .....	20,724	20,159	20,167	22,686	23,370	25,100	24,472	23,179	22,154	22,223
Harrison .....	17,765	18,071	17,967	19,406	19,017	19,233	19,490	18,438	17,213	17,251
Henry .....	10,232	10,281	10,132	10,631	10,628	10,563	11,415	11,222	12,204	12,065
Henry .....	12,204	12,029	12,769	13,068	13,433	14,294	15,427	14,676	14,178	12,886

Highland	16,435	17,323	17,648	20,213	20,483	20,046	20,462	20,188	19,921	18,774
Hocking	8,970	9,880	8,860	8,891	8,884	9,324	9,414	9,772	9,917	9,711
Holmes	15,255	15,980	15,725	16,754	16,094	19,271	19,778	17,862	17,108	18,241
Huron	11,396	11,944	12,615	13,763	14,132	13,763	15,686	15,214	14,779	14,779
Jackson	10,194	9,625	8,917	10,081	10,077	9,724	10,349	11,061	11,939	11,273
Jefferson	11,348	11,290	10,891	10,817	10,876	11,444	11,962	12,035	12,577	12,773
Knott	20,191	20,191	16,676	17,694	18,243	18,449	20,317	17,625	16,562	18,907
Lake	6,469	6,593	6,370	7,276	7,479	8,167	7,727	7,538	7,672	7,189
Lawrence	7,647	7,719	7,821	7,775	8,157	8,734	9,607	9,539	9,320	9,320
Licking	25,571	24,905	25,700	28,536	28,674	29,828	30,307	28,430	26,757	26,760
Logan	16,156	15,451	16,139	17,724	17,629	18,437	20,257	19,772	19,144	18,828
Lorain	19,682	19,400	20,613	21,623	21,224	22,170	23,903	23,163	23,410	22,189
Lucas	9,234	9,292	9,463	9,625	9,576	10,263	10,140	10,039	9,744	9,317
Madison	18,334	18,321	18,735	21,432	20,836	19,876	21,082	24,111	21,223	19,470
Marion	16,392	17,194	18,240	18,874	16,429	19,736	19,689	18,925	17,573	18,384
Marion	13,218	13,215	15,261	15,261	15,223	15,681	17,333	16,693	14,781	15,185
Medina	13,473	13,083	15,664	16,731	17,131	18,134	18,134	17,011	18,143	17,894
Melms	12,967	8,750	15,664	8,956	9,452	9,688	10,010	10,698	11,271	10,748
Mercer	16,617	16,622	17,001	18,198	18,135	18,763	18,126	17,449	16,598	15,713
Miami	13,826	13,653	13,792	14,656	14,306	15,928	16,064	15,870	14,305	14,523
Monroe	12,108	11,368	11,617	12,023	11,771	11,553	12,202	12,570	11,440	12,460
Montgomery	16,520	17,437	18,867	19,341	18,897	19,738	20,303	21,298	20,540	19,791
Morgan	10,946	11,384	11,389	12,114	11,999	11,913	13,043	13,632	13,632	13,606
Morrow	12,838	11,927	3,033	14,620	15,232	15,294	16,857	13,017	14,106	15,036
Muskingum	20,957	21,452	21,700	22,181	23,023	23,915	24,625	25,389	24,663	24,316
Noble	13,553	13,804	13,365	14,351	14,866	13,864	14,531	14,834	13,904	14,312
Ottawa	7,997	7,599	7,843	8,542	8,198	8,960	9,040	9,155	9,008	8,792
Paulding	6,368	6,879	6,524	6,846	7,296	8,342	8,369	8,134	7,711	6,469
Perry	12,811	13,512	13,275	14,426	14,471	13,776	13,791	15,682	15,601	16,318
Pickaway	19,237	20,971	20,528	22,660	21,824	20,086	22,990	22,087	21,967	20,121
Pike	6,223	6,967	6,825	6,543	6,567	6,418	6,782	6,394	6,197	6,143
Portage	19,948	19,144	18,746	21,147	21,339	22,685	22,266	22,668	21,076	6,143
Preble	15,386	16,630	16,249	17,341	17,035	18,367	18,824	17,719	17,440	16,098
Putnam	14,881	14,571	16,239	17,892	17,672	19,323	19,704	18,788	17,194	16,822
Richland	16,979	16,368	17,369	17,049	18,650	18,906	18,817	17,965	17,281	17,095
Ross	17,644	17,440	19,570	21,241	19,469	20,744	22,299	22,662	21,793	21,124
Sandusky	13,311	11,769	13,559	13,739	14,212	14,854	15,800	15,395	13,491	14,239
Seloto	8,860	8,687	8,760	9,010	9,057	8,954	9,200	8,925	8,405	8,815
Seneca	16,648	16,344	17,442	18,545	18,813	19,232	19,232	17,063	16,203	17,133
Shelby	14,824	14,920	13,548	15,680	15,600	16,447	16,066	16,147	15,069	16,091
Stark	24,300	21,773	25,253	26,237	26,203	26,212	26,590	27,542	28,702	28,652
Summit	17,127	17,482	19,873	19,295	19,510	20,067	20,585	20,164	20,729	21,465
Thurman	25,065	25,708	26,594	26,594	26,849	29,922	30,676	31,628	32,611	32,350
Tuscarawas	17,731	19,430	19,618	20,561	20,485	20,920	20,770	21,061	20,826	21,139
Union	14,900	14,039	14,305	15,748	15,879	16,544	17,738	17,596	14,834	15,222
Van Wert	10,836	11,464	11,846	12,925	13,574	12,751	13,127	13,673	12,648	12,198
Vinton	6,658	5,770	5,933	5,753	6,193	5,988	6,081	6,407	6,865	6,646
Warren	12,114	12,911	12,682	13,929	14,551	15,261	18,072	18,851	17,373	15,624
Washington	15,058	14,501	14,070	14,112	14,691	14,629	15,333	15,934	17,413	17,771
Wayne	23,458	22,722	22,060	23,760	23,758	25,348	25,500	26,210	26,490	25,352

TABLE SHOWING THE NUMBER OF CATTLE IN OHIO FOR TEN YEARS, INCLUDING CITIES AND RURAL DISTRICTS—Concluded.

Counties.	Number of Cattle.									
	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Williams .....	15,063	14,450	15,286	14,732	14,330	14,923	14,454	14,136	13,530	12,244
Wood .....	17,681	16,941	16,890	16,335	19,349	20,869	20,948	20,874	20,044	17,909
Wyandot .....	12,558	11,913	12,926	14,669	13,542	14,406	14,826	14,348	13,091	14,200
Totals .....	1,307,528	1,306,994	1,319,414	1,407,115	404,688	1,464,324	1,509,754	1,481,586	1,453,391	1,427,661

TABLE SHOWING THE NUMBER OF MULES IN OHIO FOR TEN YEARS.

Counties.	Number of Mules.									
	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Adams .....	349	290	318	299	233	224	218	223	193	190
Allen .....	165	188	134	153	108	98	92	85	94	102
Ashtabula .....	113	100	112	110	134	98	83	79	78	66
Athens .....	89	71	48	49	87	98	20	25	40	35
Auglaize .....	198	118	182	151	82	123	113	111	141	119
Belmont .....	254	182	162	266	148	102	428	388	118	114
Brown .....	263	346	212	303	316	502	274	440	201	374
Bryan .....	408	320	303	315	332	323	239	239	201	199
Builer .....	614	572	604	622	614	608	621	433	404	472
Carroll .....	166	106	97	73	84	74	81	67	69	63
Champaign .....	501	174	386	361	332	296	222	219	151	169
Clark .....	610	544	487	501	476	392	276	276	232	201
Clermont .....	583	514	536	660	566	491	566	534	520	439
Columbiana .....	698	663	630	626	607	468	380	344	288	296
Coshocton .....	274	234	226	182	189	142	103	73	71	62
Crawford .....	178	169	159	174	157	162	128	139	128	159
Cuyahoga .....	246	160	165	138	146	141	113	113	97	69
Darke .....	84	101	114	107	106	62	69	63	42	49
Delaware .....	413	402	402	387	377	394	317	327	285	297
Denance .....	83	66	65	55	62	49	68	70	71	59
Delaware .....	182	174	163	220	169	132	96	90	260	57
Erie .....	22	18	20	20	11	16	14	9	13	15
Fairfield .....	233	189	185	208	176	148	170	138	119	130
Fayette .....	519	365	356	385	468	310	269	267	197	174
Franklin .....	310	303	370	401	297	160	160	103	131	113
Fulton .....	40	34	23	35	22	22	30	30	33	27
Galla .....	274	205	158	153	170	166	178	136	145	207
Geauga .....	41	46	63	32	33	26	24	35	29	34
Greene .....	573	677	411	338	316	281	263	230	183	163
Guernsey .....	358	401	337	346	360	340	277	234	201	190
Hamilton .....	1,243	1,390	1,063	1,092	1,014	935	1,017	1,014	1,242	1,112
Hancock .....	129	107	68	63	66	60	96	61	71	83
Hardin .....	187	140	118	123	113	108	87	72	77	88
Harrison .....	109	128	134	94	103	121	57	54	75	66
Henry .....	118	89	74	72	63	62	78	77	77	79

TABLE SHOWING THE NUMBER OF MULES IN OHIO FOR TEN YEARS—Concluded.

Counties.	Number of Mules.									
	1908.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Highland	596	602	458	383	306	300	105	69	54	64
Hocking	98	92	79	74	70	64	66	56	61	66
Holmes	81	101	62	64	69	64	375	190	225	219
Huron	116	89	84	76	88	74	78	60	62	49
Jackson	418	463	419	834	806	764	768	762	866	838
Jefferson	97	140	88	369	342	361	364	237	163	186
Knox	169	171	137	171	182	140	136	134	109	114
Lake	25	26	24	24	13	4	13	8	14	5
Lawrence	391	400	427	494	408	510	491	537	519	546
Licking	229	203	176	210	168	169	143	147	112	101
Logan	293	298	230	163	143	121	103	89	79	81
Lorain	42	47	100	26	22	40	36	33	30	50
Lucas	64	50	40	44	47	38	64	73	51	98
Madison	316	322	348	334	284	284	302	210	191	235
Mahoning	254	219	202	187	110	97	97	81	78	77
Marion	269	190	187	184	161	175	169	167	137	186
Medina	76	88	81	194	78	109	155	107	116	107
Melgs	221	253	243	243	224	233	214	200	188	210
Mercer	173	165	161	145	165	152	128	126	125	120
Miami	556	511	475	413	335	370	289	276	211	233
Monroe	63	43	46	54	56	59	69	68	66	69
Montgomery	687	445	440	373	353	280	276	243	227	246
Morgan	47	38	55	38	35	38	38	38	38	41
Morrow	129	112	99	96	68	66	71	46	42	42
Muskingum	310	301	254	215	178	183	182	161	163	163
Noble	77	70	54	50	35	34	34	44	33	36
Ottawa	36	36	32	46	45	48	50	47	33	36
Paulding	159	112	100	72	96	84	65	64	69	48
Perry	84	81	70	74	70	136	122	150	110	106
Pickaway	309	335	322	332	294	325	327	304	301	281
Pike	298	291	259	217	213	206	177	172	169	160
Portage	80	71	60	82	106	111	77	101	96	70
Preble	672	650	557	419	388	363	346	403	329	320
Puinam	97	940	93	164	363	63	64	61	79	95
Richland	300	247	191	157	162	160	160	133	137	114
Ross	240	216	203	186	220	181	166	168	163	163
Sandusky	79	72	51	36	39	44	38	47	47	60

Schoon	672	630	600	573	612	519	528	571	571	603
Seneca	148	119	147	158	142	130	73	91	58	89
Shelby	160	160	79	78	107	100	113	119	80	97
Stark	203	288	284	311	239	316	369	361	323	361
Summit	136	113	108	114	130	116	96	208	89	87
Trumbull	122	125	147	119	130	77	82	68	92	94
Tuscarawas	167	162	162	191	168	225	229	219	144	118
Union	147	173	131	103	102	104	96	75	46	46
Van Wert	186	158	177	191	234	202	191	221	136	168
Vinton	187	240	186	119	149	125	112	106	101	97
Warren	525	560	476	470	447	442	393	361	378	397
Washington	164	161	139	339	308	150	143	168	177	191
Wayne	457	391	296	76	308	281	227	180	152	167
Williams	129	120	96	98	55	68	42	30	31	40
Wood	141	139	89	78	94	78	64	71	66	94
Wyandot	148	168	171	137	159	131	105	124	61	60
Totals.....	22,334	21,083	18,893	18,986	18,047	16,990	16,283	15,197	14,630	14,373

## AGRICULTURAL REPORT.

TABLE SHOWING NUMBER OF SHEEP IN OHIO FOR TEN YEARS.

Counties.	Number of Sheep.									
	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Adams .....	8,074	8,224	7,072	6,343	6,448	5,404	5,890	7,598	8,857	9,068
Allen .....	23,801	22,486	20,580	18,199	16,848	16,880	17,467	19,206	20,732	20,707
Ashtand .....	40,899	39,507	37,271	36,714	31,568	33,532	34,314	26,243	37,308	36,876
Ashtabula .....	8,459	8,548	7,700	7,206	6,606	8,629	10,972	12,693	14,795	16,576
Athens .....	47,803	46,274	40,480	41,611	39,278	41,739	42,075	46,063	47,649	46,086
Auglaize .....	9,444	8,695	8,606	7,224	6,738	7,163	8,614	10,128	11,551	12,011
Belmont .....	82,297	76,086	72,593	85,143	68,818	63,307	66,923	72,968	84,037	84,760
Brown .....	9,121	8,340	7,362	7,081	7,169	6,712	7,139	9,579	12,327	12,814
Butler .....	9,215	9,367	8,615	7,346	6,486	6,752	7,232	7,686	9,471	9,980
Carroll .....	62,172	57,478	62,601	62,171	49,074	61,675	60,675	52,082	67,992	69,301
Champaign .....	24,607	22,416	22,651	21,718	19,793	18,993	17,991	21,929	29,264	23,476
Clark .....	25,265	22,525	23,617	20,909	20,676	20,622	20,003	22,440	29,086	23,829
Clermont .....	4,114	3,984	3,734	3,542	3,022	3,654	4,375	6,742	8,067	7,713
Clinton .....	18,435	17,828	16,339	15,367	15,217	15,217	16,996	22,404	25,313	25,787
Columbiana .....	29,935	28,763	24,493	25,331	22,080	24,750	26,758	30,127	35,700	36,361
Coshocton .....	98,618	93,685	89,785	80,962	75,654	74,769	72,961	74,762	75,909	77,362
Crawford .....	50,663	49,622	48,769	45,676	39,556	42,133	40,976	42,153	46,952	46,257
Cuyahoga .....	4,387	4,747	4,657	4,302	3,911	4,711	5,496	6,344	6,838	7,119
Lake .....	6,135	5,501	5,444	4,649	4,532	4,519	6,144	7,338	7,717	7,754
Defiance .....	16,379	16,564	14,835	14,266	12,530	13,889	14,724	15,996	15,973	14,494
Delaware .....	52,013	48,901	46,590	43,593	42,664	37,711	33,526	45,189	46,228	44,678
Erie .....	12,762	12,798	10,654	9,467	9,427	9,908	10,691	11,942	12,909	12,924
Fairfield .....	46,526	18,517	15,014	14,517	11,736	12,056	13,780	15,456	16,673	18,443
Fayette .....	11,118	11,600	10,580	9,969	7,689	7,720	9,710	11,323	13,296	13,555
Fulton .....	14,068	15,083	15,201	14,367	13,518	15,465	16,467	19,898	23,245	21,128
Gallia .....	19,392	18,701	12,493	11,493	10,668	9,992	10,952	11,210	13,617	13,480
Geauga .....	6,712	5,238	6,099	4,568	5,068	5,553	7,013	9,677	10,936	12,066
Greene .....	20,502	17,767	16,018	14,877	15,569	16,511	16,642	18,648	20,321	18,666
Hamilton .....	81,709	75,981	69,618	67,202	63,849	60,549	61,669	67,246	72,866	74,621
Hancock .....	2,542	2,675	2,282	1,968	1,786	1,107	1,992	2,518	2,673	2,139
Hardin .....	38,842	39,020	37,222	36,567	34,189	36,130	36,428	38,295	38,764	36,006
Hardy .....	61,644	48,448	42,124	37,223	31,947	31,144	31,798	33,653	34,503	36,006
Harrison .....	12,436	113,461	107,365	102,796	96,406	91,171	94,425	96,304	103,812	104,134
Henry .....	8,208	8,636	7,007	6,460	5,776	6,926	7,748	8,156	9,080	8,722



Highland	22,868	21,020	17,959	16,025	17,456	13,327	14,890	19,975	25,466	25,581
Hocking	16,518	15,829	14,041	12,800	13,396	14,121	13,911	16,243	17,188	17,293
Holmes	29,017	31,405	26,727	26,569	24,428	23,725	26,190	29,802	31,246	31,246
Huron	54,576	66,498	62,169	62,775	46,977	48,254	47,172	67,682	68,312	68,312
Jackson	4,062	4,330	3,582	3,738	3,829	4,501	6,060	7,738	8,304	8,358
Jefferson	41,067	47,009	44,035	43,308	40,583	42,774	49,160	55,219	60,433	60,433
Knox	120,371	130,377	116,250	104,455	99,078	96,505	96,522	91,033	90,537	96,098
Lake	3,753	3,657	3,998	4,055	3,610	3,792	5,760	6,087	6,456	6,456
Lawrence	1,701	1,815	1,442	1,481	1,414	1,499	1,711	2,590	3,456	3,350
Licking	116,034	103,471	101,573	98,380	85,580	88,546	90,760	96,795	99,477	94,453
Logan	49,514	37,551	32,564	30,699	25,966	26,623	31,790	35,363	36,862	36,862
Lorain	17,188	17,545	15,893	16,206	15,518	16,272	18,774	22,914	25,437	26,763
Lucas	2,077	2,165	2,005	1,707	1,492	1,873	1,993	2,699	3,026	3,339
Madison	21,670	21,232	22,108	20,228	15,653	15,131	15,942	21,985	24,955	25,540
Mahoning	18,927	18,377	17,134	17,024	17,168	18,557	18,557	21,674	21,846	24,992
Marion	50,906	55,744	53,745	50,397	44,210	46,277	48,701	49,401	66,661	67,311
Marina	21,416	21,465	21,877	19,339	19,339	21,705	23,098	26,629	30,331	31,042
Meigs	13,408	13,408	13,408	13,408	13,408	13,408	13,408	13,408	13,408	13,408
Mercer	13,408	13,408	13,408	13,408	13,408	13,408	13,408	13,408	13,408	13,408
Miami	2,944	2,944	2,944	2,944	2,944	2,944	2,944	2,944	2,944	2,944
Monroe	15,147	15,147	15,147	15,147	15,147	15,147	15,147	15,147	15,147	15,147
Montgomery	3,007	2,984	2,915	2,227	1,991	2,069	2,500	3,096	3,097	3,216
Morgan	82,859	70,951	64,451	65,351	59,973	55,753	54,973	62,039	69,100	68,079
Morrow	75,956	70,950	70,085	67,090	61,756	61,644	72,400	66,114	66,165	66,313
Muskingum	108,342	94,612	91,237	86,791	85,324	81,018	82,556	85,691	92,223	89,319
Noble	65,833	58,817	51,018	50,539	49,698	46,953	48,434	56,170	57,012	56,683
Ottawa	6,083	6,012	5,930	5,641	4,498	4,787	4,918	5,172	5,370	4,991
Paulding	11,069	9,806	8,290	7,642	7,436	6,983	8,006	8,912	9,376	8,526
Perry	34,963	33,352	27,106	26,775	25,346	26,093	28,235	29,497	32,380	29,087
Pickaway	9,432	6,985	7,794	6,327	5,063	6,077	6,386	8,899	11,223	10,625
Pike	4,633	4,575	4,591	3,900	3,762	3,794	4,089	4,535	4,450	4,902
Portage	16,463	16,902	16,918	16,041	13,249	15,943	16,932	20,833	23,790	25,446
Preble	7,275	7,147	6,381	6,167	3,866	6,031	6,290	6,967	6,967	7,589
Putnam	14,069	13,142	13,519	11,328	10,143	9,951	10,979	13,316	13,316	13,403
Richland	46,966	44,621	41,917	39,422	34,854	37,747	39,248	39,780	42,869	41,787
Ross	11,754	11,563	9,567	8,754	8,076	7,890	9,004	10,205	12,196	11,786
Sandusky	16,817	16,902	15,357	13,686	13,658	14,585	15,195	17,107	15,923	16,079
Scioto	1,155	896	888	931	1,126	1,767	1,809	2,067	2,069	1,964
Seneca	44,765	43,483	37,507	38,999	35,049	35,427	35,498	37,416	35,708	38,001
Shelby	6,982	6,758	5,551	6,020	4,573	4,300	7,848	7,545	7,177	8,295
Stark	16,159	16,880	15,573	15,443	11,194	16,283	16,565	19,971	22,388	24,829
Summit	5,197	5,073	5,189	4,936	4,588	5,416	6,722	7,560	9,140	9,312
Trumbull	15,562	15,564	14,474	13,719	12,206	13,367	16,540	21,933	25,130	27,653
Tuscarawas	40,357	33,457	39,447	37,411	32,165	26,085	27,644	29,198	32,772	33,977
Union	21,883	19,195	11,650	12,048	10,068	10,394	13,333	15,236	14,963	14,963
Van Wert	8,010	7,281	6,528	5,237	4,678	5,685	17,615	19,713	19,675	19,653
Vinton	3,648	3,362	29,344	27,307	6,378	26,232	5,860	9,051	11,239	12,336
Warren	20,064	20,261	18,429	19,534	17,211	17,421	19,521	32,679	37,390	40,064
Wayne	20,064	20,261	18,429	19,534	17,211	17,421	19,521	32,679	37,390	40,064

TABLE SHOWING NUMBER OF SHEEP IN OHIO FOR TEN YEARS—Concluded.

Counties.	Number of Sheep.									
	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Williams .....	23,244	26,027	25,743	25,324	22,532	25,722	25,877	23,046	28,056	25,539
Wood .....	14,585	13,515	12,814	11,951	11,032	14,631	14,942	13,633	13,600	13,607
Wyandot .....	72,694	63,212	63,830	63,639	58,913	60,690	62,773	60,636	66,940	66,852
Totals.....	2,606,203	2,464,754	2,394,138	2,200,010	2,005,553	2,033,072	2,127,451	2,331,078	2,546,772	2,544,070

TABLE SHOWING THE NUMBER OF HOGS IN OHIO FOR TEN YEARS.

Counties.	Number of Hogs.									
	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Adams	7,095	10,346	9,880	7,488	7,943	8,899	10,478	8,289	8,621	10,346
Allen	21,061	30,782	31,441	23,123	22,416	21,911	23,354	26,238	24,351	23,449
Ashland	13,823	17,072	17,289	13,147	16,016	19,392	20,808	17,926	26,717	16,536
Ashtabula	3,283	5,490	4,314	3,621	4,163	5,247	6,466	4,915	4,031	3,661
Athens	1,977	2,725	3,074	2,246	2,062	2,915	2,407	2,865	2,978	3,444
Auglaize	24,326	30,625	29,836	23,191	22,278	22,179	22,407	25,091	25,759	26,581
Baldwin	8,521	8,902	8,941	7,840	7,208	9,105	9,758	9,735	9,441	10,806
Brown	17,549	21,224	21,219	16,088	16,558	20,349	20,069	18,436	19,960	21,708
Buchanan	12,801	28,453	25,266	18,938	20,804	24,376	21,780	24,417	21,381	20,768
Butler	6,318	8,226	7,859	6,333	7,113	8,669	9,102	8,727	7,680	8,276
Champaign	26,514	36,297	33,375	29,004	31,131	35,297	34,498	33,409	31,768	29,921
Clark	9,068	23,246	23,069	23,167	24,743	25,400	25,059	24,066	22,838	26,571
Clermont	14,543	14,844	14,844	11,112	11,460	13,788	14,549	15,012	15,067	16,014
Columbiana	12,370	11,048	10,213	9,225	10,518	12,586	37,210	38,230	40,796	38,483
Clinton	8,331	11,048	48,242	9,225	10,518	12,586	11,927	11,359	10,642	11,376
Coshocton	9,229	10,213	10,213	10,686	9,812	12,535	15,736	14,066	13,022	13,022
Crawford	23,578	26,241	27,878	28,295	27,730	24,216	30,251	32,416	29,198	26,801
Cuyahoga	1,338	1,943	2,110	1,896	2,186	2,510	2,636	2,636	2,047	2,047
Darke	70,157	44,474	41,885	34,942	39,324	40,324	39,670	38,755	35,686	34,228
Delaware	9,528	16,624	16,541	13,643	10,983	13,413	15,260	14,923	14,494	13,747
DeWitt	17,554	21,041	20,658	14,334	17,761	22,575	22,420	24,887	22,944	21,726
Eric	5,162	6,962	6,873	6,837	6,413	7,209	7,265	7,410	6,474	6,030
Fairfield	28,293	35,567	35,563	28,566	29,036	32,495	31,156	31,248	28,755	27,732
Fayette	45,341	48,277	42,954	36,309	35,464	32,777	29,967	32,224	27,185	26,132
Franklin	18,778	21,764	23,883	20,840	23,003	23,624	22,138	22,733	22,747	21,162
Fulton	13,334	23,186	20,871	18,571	22,688	22,966	21,298	22,133	19,773	16,711
Gallia	3,574	6,131	4,760	3,760	4,081	5,344	6,454	6,512	6,803	6,540
Greene	9,969	3,983	3,889	3,300	3,333	4,183	4,068	4,453	3,532	3,527
Groves	20,948	32,347	31,782	25,577	28,985	30,961	30,099	27,736	25,711	26,703
Hamersley	3,683	5,406	5,737	4,913	4,031	6,647	6,096	6,138	6,686	6,407
Hamilton	6,675	9,903	9,689	7,936	8,348	9,431	9,865	10,307	10,621	11,060
Hancock	22,228	29,621	37,324	23,880	31,188	30,653	33,971	33,971	31,449	31,436
Hardin	32,228	34,999	32,125	21,024	23,449	32,062	31,859	31,953	28,904	29,292
Harrison	3,961	5,093	5,277	4,487	4,140	5,604	6,209	6,969	6,010	6,307
Henry	11,939	18,846	18,134	14,849	13,167	13,743	13,494	17,962	17,871	19,022

TABLE SHOWING THE NUMBER OF HOGS IN OHIO FOR TEN YEARS—Concluded.

Counties.	Number of Hogs.									
	1899.	1903.	1907.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
Highland	32,631	40,313	39,253	30,939	28,859	32,627	32,731	34,104	34,570	33,435
Hocking	4,374	5,661	5,267	4,654	4,078	5,309	5,643	5,260	6,285	5,942
Holmes	14,151	18,419	18,572	14,833	15,738	18,154	22,529	20,669	18,905	18,486
Huron	9,552	13,443	13,726	10,148	11,203	14,252	15,649	14,677	10,913	11,198
Jackson	2,467	3,598	3,177	3,178	3,012	3,446	3,587	3,458	3,743	3,971
Jefferson	4,576	5,904	5,773	4,932	4,966	5,811	6,083	5,625	5,120	5,752
Knox	17,884	17,881	19,351	15,464	16,253	21,090	24,363	20,511	17,749	18,701
Lake	1,965	1,711	1,658	1,289	1,546	2,087	2,031	1,580	1,453	1,284
Lawrence	2,797	4,228	3,567	3,143	3,050	4,078	4,505	3,471	4,035	4,649
Licking	20,800	27,322	28,788	22,224	23,289	28,555	30,898	29,192	27,622	31,844
Logan	21,419	32,558	34,870	24,659	27,000	29,309	30,840	29,583	27,763	28,993
Lorain	5,738	7,330	8,089	6,412	7,001	8,412	8,483	8,401	7,123	6,434
Lucas	6,510	8,602	7,458	6,804	8,952	9,023	8,476	8,176	7,799	7,020
Madison	35,690	43,719	41,010	30,803	37,646	38,243	36,882	36,342	37,270	34,730
Marion	6,659	8,067	8,002	7,123	7,068	7,467	8,305	7,686	6,963	7,423
Marion	26,781	30,132	30,540	22,641	27,006	29,500	30,518	28,278	23,969	24,114
Medina	1,720	2,626	2,959	8,308	9,173	11,075	11,072	10,943	9,156	7,994
Mercer	26,186	31,555	32,413	1,810	2,276	3,772	3,180	3,211	3,433	4,094
Miami	18,465	19,535	30,231	23,805	25,066	27,180	26,868	27,107	25,518	22,684
Monroe	3,557	4,919	5,637	4,904	4,304	5,202	6,927	17,891	14,785	16,737
Montgomery	2,973	23,456	23,895	20,038	21,598	23,684	22,405	22,094	19,609	20,740
Morgan	11,060	13,386	13,556	3,769	3,753	4,986	6,081	4,967	4,550	4,552
Morrow	7,469	10,469	10,578	9,184	12,173	15,843	16,282	14,772	14,731	14,156
Muskingum	3,317	4,431	5,643	6,079	9,369	11,142	12,277	11,442	11,041	11,578
Noble	6,083	6,455	6,118	5,112	4,862	6,082	8,070	8,444	6,810	6,723
Ottawa	8,415	11,279	11,634	9,205	10,816	8,351	11,643	11,382	11,149	7,499
Paulding	7,523	10,043	9,768	7,891	8,028	9,117	9,589	9,037	8,748	9,301
Perry	31,285	33,780	33,246	25,420	26,869	24,644	25,068	26,627	28,331	30,706
Pickaway	5,634	8,168	7,166	5,741	5,778	6,573	7,165	6,287	5,771	6,795
Pike	6,094	7,712	6,694	6,249	6,850	7,301	7,553	7,301	6,016	6,123
Portage	31,317	39,979	37,385	29,095	30,869	33,086	29,481	30,655	30,285	27,958
Putnam	25,111	32,472	34,823	28,216	31,409	30,139	28,801	33,567	37,319	37,974
Richland	17,197	20,230	19,378	17,181	18,763	23,617	25,275	23,770	20,918	19,451
Ross	29,211	30,481	32,532	23,852	22,941	26,372	25,215	24,744	24,698	26,006
Sandusky	19,646	21,673	19,666	17,322	22,084	19,872	15,138	16,173	11,820	20,339
Scioto	5,717	7,121	6,897	6,038	6,251	7,377	7,512	6,041	5,506	7,420

Seneca .....	23,775	33,795	31,083	23,890	32,238	29,926	23,913	28,034	22,680	27,644
Shelby .....	16,855	20,153	21,062	15,865	17,133	19,803	16,412	19,763	13,086	18,316
Stark .....	16,941	22,729	20,352	17,353	16,707	21,938	23,993	23,199	21,623	21,685
Summit .....	6,700	9,227	9,184	7,412	7,967	9,300	9,690	9,351	8,213	7,786
Trumbull .....	5,025	6,264	5,065	6,378	6,359	6,795	6,276	6,246	6,008	6,519
Tuscarawas .....	8,913	11,654	12,475	10,909	11,170	11,612	13,083	13,070	11,812	12,450
Union .....	29,314	31,267	34,615	24,029	23,388	32,119	34,099	33,642	29,275	29,010
Van Wert .....	17,688	26,806	27,842	22,747	23,653	24,236	23,198	23,021	24,339	26,061
Vinton .....	1,738	2,531	2,258	1,666	1,779	2,109	2,214	2,111	2,097	2,248
Warren .....	20,886	26,672	23,951	19,852	19,231	20,226	20,433	27,501	21,948	22,537
Washington .....	4,006	5,726	6,030	3,882	5,026	6,623	6,221	6,072	6,357	6,870
Wayne .....	20,285	24,108	23,753	19,692	22,529	27,830	27,953	26,695	25,829	24,135
Williams .....	12,294	23,047	23,765	18,039	21,088	23,758	22,834	23,281	20,689	19,455
Wood .....	26,770	31,795	30,085	26,475	31,460	32,096	31,178	30,621	29,371	32,500
Wyandot .....	25,012	27,739	28,652	23,543	25,229	29,062	29,148	27,240	23,692	23,132
Totals .....	1,320,755	1,657,589	1,620,723	1,295,413	1,404,185	1,536,308	1,553,676	1,556,435	1,467,331	1,489,518

## ABSTRACTS FROM REPORTS OF COUNTY AGRICULTURAL SOCIETIES FOR 1909.

TABLE I—OFFICERS OF COUNTY FAIRS IN OHIO FOR 1909.

County.	President.	Postoffice.	Treasurer.	Postoffice.
Adams	O C Robuck	West Union		West Union.
Allen	John W Shannahan	Lima		Lafayette.
Ashtabula	J E Allen	Geneva		Jefferson.
Athens	H D Henry	Athens		Athens.
Auglaize	Reuben Brackney	St Johns		New Hampshire.
Belmont	E N Rogers	Barton		Maynard
Brown	V K Thompson	Georgetown		Georgetown.
Builer	E A Shide	Hamilton		Oxford
Carroll	M Brandt	Kilbuck	R M Marshall	Carrollton.
Champaign	J C H Ganson	Urbana	W B Wallace	Urbana
Clark	J S Nicklin	Springfield R R 10	A R Roudelbush	Springfield, R R 4.
Clinton	J G W Wyatt	New Richmond	H P Wilson	Owensville
Columbiana	L C Porter	Blanchester, R. F. D.	A H P Hatfield	Blanchester.
Coshocton	L H Coneland	Millport	C S O Kamp	Elkton.
Crawford	C C Porter	Coshocton	H G Bowman	Coshocton.
E. Cuyahoga	J W Stuckman	Pucyrus	S P Dawson	Bucyrus
F. Cuyahoga	L R Dunham	Cleveland	W A Huckle	Chagrin Falls.
Geauga	G C Mastick	Rocky River	Geo. March	Berea.
Darke	L N Reed	Gettysburg	W G Hutchinson	Gordon.
Defiance	C M Rogers	Mark Center	Ed Ammon	Hicksville.
Delaware	C H Fisher	Powell		Powell
Erie	C F Steen	Sandusky R. R.		Sandusky.
Fairfield	D W Ault	Baltimore		Lancaster
Fayette	Mat J Kiever	Bloomington		Washington C. H.
Fulton	A F Shaffer	Wauseon	G W Howard	Wauseon
Geauga	C A Rhodes	Huntsburg	P H Crittenden	Burton
Guernsey	C D Williamson	Xenia	C M Austin	Bellebrook.
Hamilton	Geo McMillen	Cambridge	R S Frame	Washington.
Hancock	M Y Coover	Cincinnati	Geo. E. Plau	Hartwell
Harrison	Marion Bell	Pindlay	I M Reed	Pindlay.
Hardin	John E. Hanna	Kenton	A J Sponsler	Kenton
Henry	F L Carrick	Cadiz	Chas E Stewart	Cadiz
Hickory	John H Lowry	Florida	I W Durham	Napoleon.
HIGHLAND	J G Redkey	Hillsboro, R R 4	Leslie George	Greenfield, R R 4.
Hocking	Chas J Wright	Logan	Geo Bloom	Logan
Jefferson	W O Reynard	Dillenvale, R R	Chas McKinney	Smithfield
Knox	Chas B Jackson	Mt Vernon, R. F. D.	A L Byrnes	Mt. Vernon.
Lawrence	U. T. Cox	Proctorville		

Licking	H. H. Simmons	Kirkersville	G. W. Horton	Newark
Logan	W. H. Hinkle	Degraff	Guy Detrick	Bellevontaine
Lorain	E. F. Cotton	Lorain, R. F. D.	A. W. Doncaster	Elyria
Lucas	J. E. Wilcox	Maumee	M. L. Rea	Toledo
Madison	G. R. Fitzgerald	Orient, R. R.	C. C. Fowler	London
Mahoning	James S. Price	Youngstown	M. Waddell	Canfield
Marion	D. H. Harvey	Marion	F. E. Clark	Marion
Medina	Geo. S. Beck	Wadsworth, R. F. D.	A. D. Russell	Medina, R. F. D.
Mcigs	Elias Jividen	Spiller	I. C. Brookhart	Pomeroy
Mercer	Sol Shock	Rockford	Ino. N. McDowell	Celina
Miami	Geo. A. Fry	Tippecanoe City	W. C. Mooney	Troy
Monroe	W. C. Mooney	Woodfield	Alonzo Michael	Woodfield
Montgomery	S. D. Bear	Dayton	J. E. McKeown	Dayton, R. R. 11.
Morgan	Benj. F. Reed	McConnelsville	J. G. Russell	McConnelsville
Morrow	H. B. Jenkins	Cardington	A. F. Vest	Mt. Gilead
Muskingum	H. C. Smith	Zanesville	C. W. Pettay	Zanesville
Noble	John McWilliams	Sarahsville	N. G. Saurwine	Sarahsville
Paulding	Allen Rybee	Paulding	T. S. Rittenour	Paulding
Perry	John Meenan	New Lexington	C. T. Brooke	New Lexington
Pike	W. H. Patterson	Pike	B. E. Kuhn	Pike
Portage	A. A. Gilbreath	Mantua	M. J. Scott	Ravenna
Preble	Jacob Rinck	West Alexandria	W. A. McGeorge	Eaton
Putnam	L. E. Lee	Columbus Grove	Thomas Quinlin	Ottawa
Richland	I. H. Hess	Shelby, R. F. D.	H. A. Wise	Shelby, R. R. 4.
Ross	W. L. Miller	Chillicothe	M. L. Sprankle	Chillicothe
Sandusky	S. I. Hirt	Fremont	Ed. Feil	Fremont
Scioto	L. Taylor	Rarden	John Laird	Mt. Joy
Seneca	S. W. Rohrer	Tiffin	E. B. Gilliland	Swandera
Shelby	Martin Quinisk	Sidney	Sam L. Irons	Canton
Stark	I. J. Snyder	Paris	C. W. Zimmer	Bath
Summit	B. H. Prior	Cuyahoga Falls	C. A. Fyke	Warren
Trumbull	Albert Brown	Warren	I. G. Hickox	Canal Dover
Tuscarawas	Samuel Toomey	Canal Dover	J. K. Wolf	Marysville
Union	M. T. Flaherty	Milford Center		Van Wert
Van Wert	Alex. Menizer	Convoy		Lebanon
Warren	Frank Shidaker	Harveysburg		Stanleyville
Washington	I. L. Jordan	Marietta		Wooster
Wayne	John C. McClaran	Wooster		Bryan
Williams	Jacob Faber	Bryan		Bowling Green
Wood	A. E. Royce	Bowling Green		Upper Sandusky
Wyandot	Z. T. Smith	Upper Sandusky		

## COUNTY FAIRS IN OHIO FOR 1908—WITH TIME AND PLACE.

County.	Secretary.	Postoffice.	Time of Fair.	Place of Fair.
Adams.....	G. C. Steele.....	West Union.....	Sept. 7, 8, 9 and 10.....	West Union.
Allen.....	C. A. Graham.....	Lima.....	Sept. 14, 15, 16 and 17.....	Lima.
Ashtabula.....	R. D. Lampson.....	Jefferson.....	Aug. 18, 19 and 20.....	Jefferson.
Athens.....	H. H. Haning.....	Athens.....	Aug. 9, 10, 11 and 12.....	Athens.
Auglaize.....	A. E. Schafer.....	Wapakoneta.....	Aug. 31, Sept. 1, 2 and 3.....	Wapakoneta.
Belmont.....	J. H. Taylor.....	St. Clairsville.....	Aug. 24, 25 and 26.....	St. Clairsville.
Brown.....	Lewis Ritchey.....	Georgetown.....	Oct. 5, 6, 7 and 8.....	Georgetown.
Butler.....	C. A. Kumbler.....	Hamilton.....	Oct. 5, 6, 7 and 8.....	Hamilton.
Carroll.....	P. B. Roubeshush.....	Carrollton.....	Oct. 5, 6, 7 and 8.....	Carrollton.
Champaign.....	J. W. Crowl.....	Urbana.....	Aug. 17, 18, 19 and 20.....	Urbana.
Clark.....	Elwood Miller.....	Springfield.....	Aug. 10, 11, 12 and 13.....	Springfield.
Clermont.....	A. S. Johnson.....	Amelia.....	Aug. 24, 25, 26 and 27.....	Owensville.
Clinton.....	B. E. Chaney.....	Blanchester.....	Aug. 17, 18, 19 and 20.....	Blanchester.
Columbiana.....	E. F. Moore.....	Lisbon.....	Sept. 13, 14 and 15.....	Lisbon.
Coshocton.....	W. B. Miller.....	Coshocton.....	Oct. 5, 6, 7 and 8.....	Coshocton.
Crawford.....	Guy E. Smith.....	Bucyrus.....	Sept. 14, 15, 16 and 17.....	Bucyrus.
E. Cuyahoga.....	F. C. Gates.....	Chagrin Falls.....	Aug. 31, Sept. 1, 2 and 3.....	Chagrin Falls.
W. Cuyahoga.....	L. M. Coe.....	Berea.....	Sept. 14, 15, 16 and 17.....	Berea.
Darke.....	Frank Plesinger.....	Versailles.....	Aug. 23, 24, 25, 26 and 27.....	Greenville.
Defiance.....	E. F. Armstrong.....	Hicksville.....	Sept. 21, 22, 23 and 24.....	Hicksville.
Delaware.....	B. S. Neff.....	Powell.....	Sept. 21 and 22.....	Powell.
Erie.....	F. H. Zerbe.....	Sandusky.....	Sept. 14, 15, 16 and 17.....	Sandusky.
Fairfield.....	W. T. McClenaghan.....	Lancaster.....	Oct. 13, 14, 15 and 16.....	Lancaster.
Payette.....	Dr. E. M. Hoggess.....	Washington C. H.....	Aug. 24, 25 and 26.....	Washington C. H.
Pulton.....	D. W. Williams.....	Wauson.....	Sept. 21, 22, 23 and 24.....	Wauson.
Greene.....	W. S. Ford.....	Barton.....	Sept. 7, 8, 9 and 10.....	Barton.
Guernsey.....	R. R. Grieve.....	Xenia.....	Aug. 3, 4, 5 and 6.....	Xenia.
Hamilton.....	R. C. McCreary.....	Washington.....	Sept. 28, 29, 30, Oct. 1.....	Washington.
Hardock.....	D. V. Sampson.....	Cincinnati.....	Aug. 10, 11, 12, 13 and 14.....	Carthage.
Hardin.....	R. V. Kennedy.....	Kenton.....	Sept. 15, 16, 17 and 18.....	Findlay.
Harrison.....	F. U. Jones.....	Kenton.....	Aug. 17, 18, 19 and 20.....	Kenton.
Henry.....	E. B. Kirby.....	Kadix.....	Sept. 28, 29 and 30.....	Kadix.
Highland.....	Edward Brubaker.....	Napoleon.....	Sept. 7, 8, 9 and 10.....	Napoleon.
Hocking.....	F. N. Blaser.....	Kansboro.....	Sept. 1, 12, 13 and 14.....	Kansboro.
Jefferson.....	S. S. Ruble.....	Logan.....	Aug. 18, 19, 20 and 21.....	Logan.
Knox.....	LaRoy G. Hunt.....	Smithfield.....	Sept. 22, 23 and 24.....	Smithfield.
Lawrence.....	W. W. Reckard.....	Mt. Vernon, Box 212.....	Sept. 15, 16 and 17.....	Mt. Vernon.
Licking.....	J. M. Farmer.....	Proctorville.....	Sept. 7, 8, 9 and 10.....	Proctorville.
Logan.....	Winfield Kinan.....	Newark.....	Sept. 23, 24, 25, 26 and 27.....	Newark.
Lorain.....	Anthony Niding.....	Bellefontaine.....	Sept. 23, 24, 25, 26 and 27.....	Bellefontaine.
Lucas.....	L. E. Clark.....	Elyria.....	Sept. 7, 8, 9 and 10.....	Elyria.
Madison.....	C. A. Wilson.....	Toledo.....	Sept. 14, 15, 16, 17 and 18.....	Toledo.
		London.....	Aug. 24, 25, 26 and 27.....	London.



Mahoning .....	B. L. Manchester.	Salem .....	Sept. 21, 22 and 23	Canfield.
Marion .....	James A. Knapp.	Marion .....	Sept. 28, 29, 30, Oct. 1	Marion.
Medina .....	O. O. Van Deusen	Medina .....	Aug. 31, Sept. 1 and 2	Medina.
Meigs .....	H. C. Fish.	Pomeroy .....	Sept. 8, 9 and 10	Rock Springs.
Mercer .....	Sam. I. Vining.	Celina .....	August 16, 17, 18, 19 and 20	Celina.
Miami .....	W. I. Tenney.	Troy .....	Sept. 24	Troy.
Monroe .....	Geo. P. Door.	Woodfield .....	Aug. 31	Woodfield.
Montgomery .....	Geo. K. Cetena.	Dayton .....	Sept. 6	Dayton.
Morgan .....	T. E. McKelney.	McConnelsville .....	Sept. 7	McConnelsville.
Morrow .....	O. J. Miller.	Mt. Gilead .....	Sept. 7	Mt. Gilead.
Muskingum .....	R. V. White.	Chandlersville .....	Sept. 7	Zanesville.
Noble .....	James Johnson.	Caldwell, R. R. 6.	Aug. 24	Sandusky.
Paulding .....	W. B. Jackson.	Paulding .....	Sept. 8, 9 and 10	Paulding.
Perry .....	I. R. Montgomery.	New Lexington .....	Aug. 23, Sept. 1, 2 and 3	New Lexington.
Pike .....	J. R. Blenden.	Pike .....	Aug. 18, 19 and 20	Pike.
Portage .....	H. W. Campbell.	Pleasant .....	Aug. 10, 11, 12 and 13	Pleasant.
Preble .....	Harry D. Silver.	Ravenna .....	Sept. 13, 14, 15 and 17	Ravenna.
Putnam .....	A. P. Sanders.	Eaton .....	Sept. 13, 14, 15 and 17	Eaton.
Richland .....	W. H. Gifford.	Ottawa .....	Oct. 6, 7, 8 and 9	Ottawa.
Ross .....	M. D. Sullivan.	Manfield .....	Sept. 22, 23 and 24	Manfield.
Sandusky .....	A. W. Overmyer.	Chillicothe .....	Aug. 17, 18, 19 and 20	Chillicothe.
Scioto .....	W. A. McGeorge.	Fremont .....	Sept. 21, 22, 23 and 24	Fremont.
Seneca .....	Morgan E. Ink.	Mt. Joy .....	Aug. 24, 25, 26 and 27	Mount Joy.
Shelby .....	J. E. Russell.	Republic .....	Sept. 7, 8, 9, 10 and 11	Republic.
Stark .....	J. H. Lehman.	Sidney .....	Sept. 14, 15, 16 and 17	Sidney.
Summit .....	P. G. Ewart.	Canton .....	Sept. 28, 29, 30, Oct. 1	Canton.
Tuscarawas .....	Homor C. Mackey.	E. Akron, R. R. 23	Oct. 6, 7 and 8	Warren.
Union .....	I. S. Karns.	Warren .....	Aug. 31, Sept. 1 and 2	Warren.
Van Wert .....	W. F. Broderick.	Canal Dover .....	Oct. 12, 13, 14 and 15	Canal Dover.
Washington .....	E. V. Walborn.	Marysville .....	Sept. 7, 8, 9 and 10	Marysville.
Wayne .....	Will O. Gustin.	Van Wert .....	Sept. 7, 8, 9 and 10	Van Wert.
Williams .....	Ed Flanders.	Lebanon .....	Sept. 28, 29, 30, Oct. 1	Lebanon.
Wood .....	G. J. Ebricht.	Marietta .....	Aug. 24, 25, 26 and 27	Marietta.
Wyandot .....	Robert Ogle.	Shreve .....	Aug. 25, 26 and 27	Wooster.
	R. S. Sweet.	Montpelier .....	Sept. 7, 8, 9, 10 and 11	Montpelier.
	W. P. Rowland	Bowling Green .....	Sept. 27, 28, 29, 30, Oct. 1	Bowling Green.
		Upper Sandusky .....	Sept. 7, 8, 9 and 10.	Upper Sandusky.



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### REPORT OF COUNTY SOCIETIES.

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TABLE II—ENTRIES AND AWARDS—Continued.

COUNTIES.	SWINE.										Total number entries.	Total amount premiums offered.	Total amount premiums awarded.
	Berk-shires.	Poland Chinas.	Chester Whites.	Duroc Jerseys.	York-shires.	Hamp-shires.	Tam-worths.	Other Breeds.	No.				
Adams.....	No.	No.	No.	No.	No.	No.	No.	No.	No.	23	881 00	779 00	
Allen.....	34	8	8	7	10	6	.....	24	.....	97	277 00	155 00	
Ashabula.....	9	15	11	12	7	.....	7	9	.....	65	240 00	175 00	
Athens.....	.....	5	10	8	.....	.....	.....	.....	.....	22	56 00	32 00	
Auglaize.....	31	17	18	12	.....	.....	.....	.....	.....	78	290 00	117 00	
Belmont.....	6	27	23	.....	.....	.....	.....	.....	.....	13	152 00	53 00	
Brown.....	24	20	15	34	9	.....	.....	.....	.....	108	275 00	183 50	
Butler.....	25	16	20	20	.....	.....	.....	.....	.....	89	435 00	313 20	
Carroll.....	16	5	16	.....	.....	.....	.....	.....	.....	34	196 00	106 00	
Champaign.....	19	29	40	14	23	.....	.....	.....	.....	125	260 00	234 00	
Clark.....	11	9	17	.....	28	.....	.....	3	.....	77	351 00	242 00	
Clermont.....	2	9	9	13	.....	.....	.....	.....	.....	33	160 00	94 00	
Clinton.....	12	8	11	14	6	.....	8	.....	.....	59	185 25	154 00	
Columbiana.....	16	12	6	.....	.....	.....	.....	.....	.....	41	208 00	120 00	
Coshocton.....	26	18	23	17	12	.....	.....	.....	.....	95	470 00	351 00	
Crawford.....	17	23	22	.....	.....	.....	.....	.....	.....	100	350 00	273 00	
E. Cuyahoga.....	4	13	9	5	.....	14	.....	5	.....	41	291 25	117 75	
W. Cuyahoga.....	15	7	6	.....	.....	.....	.....	9	.....	37	240 00	109 50	
Darke.....	47	14	20	30	.....	.....	.....	29	.....	140	440 00	375 40	
Defiance.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	225 00	15 00	
Delaware.....	.....	1	.....	.....	20	.....	.....	.....	.....	21	10 00	7 00	
Erie.....	.....	1	3	7	.....	.....	.....	1	.....	12	105 00	34 50	
Fairfield.....	.....	78	.....	75	.....	11	.....	59	.....	223	534 00	467 00	
Fulton.....	.....	13	2	.....	.....	8	.....	5	.....	28	307 50	57 50	
Geauga.....	8	12	8	.....	.....	5	11	.....	.....	44	156 00	86 50	
Greene.....	25	16	31	19	.....	.....	.....	39	.....	130	295 20	295 20	
Guernsey.....	.....	20	2	13	.....	.....	.....	.....	.....	16	256 00	247 00	
Hamilton.....	20	20	20	10	.....	.....	.....	.....	.....	76	212 00	80 00	
Hancock.....	8	7	.....	8	1	.....	.....	7	.....	32	196 00	70 00	
Hardin.....	6	10	.....	.....	.....	.....	.....	.....	.....	25	78 00	30 00	
Harrison.....	12	.....	.....	.....	.....	.....	.....	.....	.....	12	80 00	31 83	
Highland.....	.....	13	8	16	.....	.....	.....	.....	.....	37	242 00	193 00	
Jefferson.....	16	11	11	8	7	.....	.....	18	.....	71	142 00	11 00	
Knox.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2	198 00	4 00	
Lawrence.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	44 00	4 00	
Licking.....	29	20	16	17	24	.....	.....	.....	.....	105	400 00	345 00	
Lorain.....	20	46	38	15	25	3	.....	10	.....	167	360 00	134 00	
Lucas.....	15	15	4	13	4	.....	.....	6	.....	47	304 00	264 00	
.....	20	9	12	14	.....	.....	.....	.....	.....	55	358 00	264 00	

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Madison	26	41	20	18	.....	.....	.....	105	384 00	368 00
Marion	7	11	16	16	.....	.....	.....	49	212 00	164 00
Marion	7	18	35	40	.....	.....	.....	110	368 00	264 00
Medina	31	10	32	.....	10	.....	.....	90	213 00	211 50
Meigs	3	5	2	.....	7	.....	.....	111	100 00	39 00
Mercer	33	56	28	61	.....	.....	.....	117	510 00	439 00
Miami	2	5	6	.....	.....	.....	.....	201	500 00	470 00
Monroe	.....	.....	.....	.....	.....	.....	.....	13	132 00	62 00
Montgomery	.....	.....	.....	.....	.....	.....	.....	203	436 00	436 00
Morgan	6	21	1	9	.....	.....	.....	22	100 00	41 00
Morrow	.....	9	5	.....	.....	.....	.....	43	237 00	110 00
Muskingum	.....	21	8	.....	.....	.....	.....	29	216 00	81 00
Paulding	15	16	23	9	.....	.....	.....	94	325 00	217 00
Perry	.....	3	7	.....	.....	.....	.....	10	120 25	31 80
Pike	.....	.....	.....	.....	.....	.....	.....	15	109 00	30 00
Portage	1	1	11	.....	.....	.....	.....	14	135 00	33 50
Preble	13	.....	5	28	.....	.....	.....	14	485 00	261 00
Putnam	40	24	35	20	.....	.....	.....	55	500 00	250 00
Richland	.....	30	17	20	.....	.....	.....	165	229 00	138 00
Sandusky	41	62	43	45	.....	.....	.....	67	375 00	350 00
Scioto	.....	8	.....	6	.....	.....	.....	229	64 00	80 00
Seneca	11	21	12	15	.....	.....	.....	14	284 00	124 00
Shelby	13	23	16	38	.....	.....	.....	90	248 00	221 00
Stark	.....	12	.....	13	.....	.....	.....	25	288 00	88 00
Summit	32	17	23	24	.....	.....	.....	119	397 50	344 00
Trumbull	11	17	14	6	.....	.....	.....	62	230 00	127 00
Tuscarawas	22	.....	20	.....	.....	.....	.....	42	96 00	66 00
Union	.....	10	13	21	.....	.....	.....	44	174 00	150 00
Van Wert	17	48	24	44	.....	.....	.....	165	430 00	373 00
Warren	12	20	8	16	.....	.....	.....	56	207 00	121 70
Washington	4	4	18	2	.....	.....	.....	37	332 00	80 00
Wayne	17	27	7	6	.....	.....	.....	70	193 00	155 00
Williams	10	.....	2	5	.....	.....	.....	17	228 00	48 00
Wood	35	21	37	27	.....	.....	.....	129	352 00	300 00
Wyandot	.....	27	.....	.....	.....	.....	.....	27	64 00	64 00





Logan	89	6	12	36	16	12	24	11	24	394	358
Lorain	26	12	18	12	6	12	6	22	68	131	131
Lucas	12	12	8	12	12	12	12	22	119	315	232
Madison	12	11	18	10	12	12	8	19	96	255	253
Malhoning	14	12	18	10	16	16	8	51	92	297	299
Marion	15	26	39	10	9	9	12	12	189	514	464
Medina	15	13	32	9	6	6	12	43	120	276	184
Meigs	21	11	17	17	17	17	17	38	86	84	84
Mercer	15	15	15	15	15	15	15	121	485	86	486
Miami	15	15	15	15	15	15	15	120	324	324	284
Monroe	37	22	22	22	22	22	22	73	240	240	230
Montgomery	20	6	6	6	6	6	6	215	552	552	552
Morgan	29	14	14	14	14	14	14	84	126	126	104
Morrow	145	14	14	14	14	14	14	53	386	386	178
Muskingum	10	35	24	33	16	16	6	212	329	329	283
Noble	18	12	12	12	12	12	6	10	77	77	23
Paulding	11	9	9	9	9	9	9	177	265	265	213
Perry	11	12	12	12	12	12	6	28	64	64	42
Pike	11	9	9	9	9	9	9	6	141	141	12
Portage	11	12	12	12	12	12	7	75	231	231	188
Preble	11	12	12	12	12	12	12	140	510	510	503
Putnam	40	24	20	20	10	10	30	30	600	600	344
Richland	14	13	11	10	10	10	9	80	214	214	191
Sandusky	24	24	32	14	20	20	9	40	387	387	380
Scioto	9	15	44	14	14	14	14	9	42	42	8
Seneca	33	15	17	17	17	17	17	92	174	174	171
Shelby	10	17	17	17	17	17	17	17	192	192	24
Stark	10	9	21	15	22	22	22	87	210	210	192
Summit	24	19	36	25	25	25	27	180	338	338	338
Tribb	11	10	24	23	23	23	17	104	180	180	148
Tuscarawas	8	10	6	10	9	9	8	41	108	108	98
Union	32	15	21	23	21	21	18	165	288	288	271
Van Wert	31	22	34	23	24	24	14	209	590	590	585
Warren	10	12	12	12	12	12	12	24	61	61	59
Washington	68	3	3	3	3	3	3	8	462	462	165
Wayne	26	22	24	24	10	10	12	100	291	291	194
Williams	18	20	24	24	10	10	12	132	228	228	178
Wood	12	47	12	23	8	8	9	50	535	535	352
Wyandot	26	13	14	13	13	13	9	39	100	100	150

TABLE II—ENTRIES AND AWARDS—Continued.

Counties.	HORSES—SPEED.			POULTRY.		
	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.
Adams.....	4	\$50 00	\$50 00	210	\$150 00	\$90 50
Allen.....	94	2,400 00	2,215 00	1,122	289 25	217 00
Ashtabula.....	71	2,000 00	2,000 00	1,183	470 50	470 00
Athens.....	75	2,360 00	2,360 00	229	60 00	38 25
Auglaize.....	79	3,400 00	2,120 00	370	155 00	82 00
Belmont.....	38	1,450 00	1,050 00	359	352 00	172 50
Brown.....	9	30 00	15 00	448	121 50	121 50
Butler.....	216	4,300 00	3,425 00	730	301 50	246 37
Carroll.....		1,470 00	1,209 50	250	85 80	80 00
Champaign.....	65	3,450 00	3,355 00	137	156 00	78 50
Clark.....	168	5,350 00	4,190 00	714	588 40	315 80
Clermont.....	40	1,030 00	1,000 00	203	77 50	72 50
Clinton.....	73	1,685 00	1,402 00	154	76 80	73 50
Columbiana.....	60	1,900 00	1,850 00	190	115 00	60 75
Coshocton.....	125	3,450 00	1,783 00	872	555 00	430 00
Crawford.....	68	2,550 00	1,997 50	423	302 35	229 10
East Cuyahoga.....	92	1,760 00	1,295 00	534	410 10	335 70
West Cuyahoga.....	57	1,900 00	1,577 50	235		103 35
Darke.....	61	3,650 00	2,590 00	1,504	342 75	271 09
Defiance.....			1,778 70	164	255 75	36 25
Delaware.....	15	110 00	110 00	4	10 00	4 00
Erie.....	60	2,220 00	2,220 00	75	195 00	102 00
Fairfield.....	159	2,900 00	2,900 00	784	347 50	314 50
Fulton.....			1,130 00	678	400 00	181 25
Geauga.....	55	2,000 00	2,000 00	478	857 00	150 25
Greene.....		3,300 00	3,200 00	862	320 00	320 00
Guernsey.....	40			434		
Hamilton.....	177	4,201 50	2,736 50	956	389 00	338 00
Hancock.....	59	2,450 00	1,975 00	349	930 00	355 00
Hardin.....	86		2,600 00	54	138 25	21 25
Harrison.....	20	850 00	850 00	10	35 75	3 75
Highland.....	60	1,200 00	886 50	25	36 50	13 50
Hocking.....	36	2,000 00	1,400 00	14	14 50	4 75
Hocking.....	28	1,600 00	1,560 00	840	368 00	253 00
Jefferson.....	92	2,100 00	1,564 75	110	426 50	62 75
Knox.....	21	900 00	654 00	3	33 00	1 00
Lawrence.....	86	4,100 00	2,867 00	646	262 80	196 45
Licking.....	104	2,925 00	2,937 50	491	158 75	143 00
Lorain.....	70	3,250 00	2,492 50	1,258	650 00	520 50
Lucas.....	147	7,300 00	6,201 00	1,176	841 00	595 00
Madison.....	173	3,700 00	3,590 00	92	148 50	77 00
Mahoning.....	33	2,000 00	1,970 00	741	350 00	213 00
Marion.....	117	2,980 00	2,980 00	493	362 75	162 25
Medina.....	53	1,650 00	1,360 33	774		303 15
Meigs.....		1,100 00	950 00	5	83 00	4 50
Mercer.....	72	3,950 00	3,022 50	838	398 75	303 00
Miami.....	146	3,200 00	3,185 00	770	216 00	203 00
Monroe.....	63	2,000 00	1,940 00	125	150 00	85 00
Montgomery.....	118	6,000 00	6,000 00	488	205 00	205 00
Morgan.....		650 00	550 00	200	250 00	94 15
Morrow.....	52	2,200 00	2,200 00	310	231 75	124 00
Muskingum.....	77	3,100 00	2,380 00	553	358 00	220 00
Noble.....	13	400 00	400 00	2	111 00	1 50
Paulding.....	109	2,700 00	1,437 50	359	429 00	142 00
Perry.....	26	1,800 00	1,600 00	76	70 25	45 50
Pike.....	41	2,150 00	1,112 50	676		259 75
Portage.....			1,118 95	234	162 00	96 50
Preble.....	106	3,000 00	2,960 00	1,038	320 50	203 50
Putnam.....	80	3,000 00	2,086 73	400	300 00	148 70
Richland.....	80	1,974 00	1,974 00	162	318 50	49 75
Sandusky.....	81	2,450 00	1,877 50	1,032	695 50	188 50
Scioto.....	26	1,145 00	758 00	136	60 00	41 10
Seneca.....	40	2,000 00	2,000 00	207	428 00	258 00
Shelby.....	80	2,850 00	2,795 00	412	221 05	138 50
Stark.....	43	1,500 00	1,367 00	379	284 75	164 20
Summit.....		3,600 00	3,300 00	2,127	1,346 00	940 95
Trumbull.....	74	2,000 00	1,628 34	361	124 50	91 00
Tuscarawas.....	48	1,600 00	1,327 00	127	120 00	63 65
Union.....	73	2,300 00	1,797 25	261	291 75	240 00
Van Wert.....	75	3,450 00	3,450 00	1,858	468 00	429 50
Warren.....	118	2,000 00	1,970 00	408	114 55	48 00
Washington.....	54	4,000 00	2,900 00	295	175 00	170 00
Wayne.....	60	2,400 00	2,100 00	2,056	755 00	427 95
Williams.....	43	2,325 00	1,408 00	363	218 65	143 25
Wood.....	112	7,700 00	7,200 00	1,387	1,263 25	953 25
Wyandot.....				168	483 00	54 80

**TABLE II—ENTRIES AND AWARDS—Continued.**

Counties.	MACHINERY AND AGRICULTURAL IMPLEMENTS.					MANUFACTURES.		
	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.	Shop machinery, No.	Vehicles No.	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.
Adams.....	54	\$44 00	\$28 00					
Allen.....	9	30 00	30 00	26	54	80	\$42 00	\$28 00
Ashtabula.....	3	30 00	30 00	6	75	81	28 25	4 25
Athens.....					16	16	36 00	36 00
Auglaize.....	79			10	132	142		
Belmont.....	17	86 50	16 75		10	10	7 00	6 00
Brown.....				42	14	56	41 50	26 50
Butler.....	2	75 00	67 50		1	1	40 00	22 00
Carroll.....	1	10 00	10 00		8	8	26 50	24 50
Champaign.....	3	10 00	10 00			24	76 00	46 00
Clermont.....				6		6	5 00	5 00
Cinton.....	53			7	39	46		
Columbiana.....	20	33 00	33 00					
Coshocton.....	3	25 00	25 00					
Crawford.....						55	89 00	74 75
E. Cuyahoga.....	64	91 25	36 25			3	63 00	30 00
W. Cuyahoga.....	32	66 25	24 50	23		50	53 55	47 50
Darke.....								32 00
Delaware.....	6			2	4	6	27 00	
Fulton.....	19	133 00	46 00					
Geauga.....	1					1		
Guernsey.....	43					27		
Hamilton.....	2	45 00	45 00					
Hancock.....						12	18 00	18 00
Hardin.....	9					6		
Harrison.....	19	45 50	25 75	8	4	12	21 75	13 00
Highland.....				4	8	12		
Hocking.....	7	9 75	7 50					
Jefferson.....	22	82 00	33 00	8	10	18	42 00	25 00
Knox.....				3	2	5		
Logan.....	90	75 50	43 00	50		50		
Lucas.....	19				25			
Mahoning.....				37		37	113 00	56 00
Marion.....	7	135 00	80 00					
Medina.....	1	12 00	8 00	8	5	13	62 00	37 50
Mercer.....			5 00		158	158		5 00
Miami.....	3	50 00	50 00	50	70	120		
Morgan.....	16	38 50	5 50					
Noble.....	35	93 00	33 00		2	2	12 00	4 00
Perry.....	2	20 00	2 00					
Portage.....						1	75 00	14 00
Preble.....	3	40 00	40 00					
Putnam.....	200					100		
Richland.....	3	10 00	10 00					
Sandusky.....	198	290 25	188 50					
Shelby.....	5	25 00	25 00					
Summit.....	150			10	19			
Trumbull.....	2	30 00	25 00					
Tuscarawas.....	12	15 00	15 00		8	8	16 00	16 00
Van Wert.....	62	74 00	68 00		48	48	156 00	119 00
Washington.....	25			50	50			
Williams.....	2	32 00	24 00					
Wood.....	163					185		
Wyandot.....	8	47 00	45 00					

TABLE II—ENTRIES AND AWARDS—Continued.

Counties.	FARM PRODUCTS.								
	Grains and Seeds	Vegetables.	Honey and Maple.	Preserves and Canned Goods.	Butter and Cheese.	Culinary.	Total Number Entries.	Total amount premiums offered.	Total amount premiums awarded.
	No.	No.	No.	No.	No.	No.			
Adams.....	19	97		307			423	\$97 00	\$88 25
Allen.....	123	385	3	196	16	38	761	438 75	345 57
Ashtabula.....	55	132	8		8	88	511	170 05	138 05
Athens.....	20	200		64		8	292	110 00	85 51
Auglaize.....	79	120	4	330	12	96	641	195 00	127 50
Belmont.....	43	69	2	141	1		256	212 75	111 75
Brown.....	103	242	5	352	11		743	148 25	128 75
Butler.....	100	183	4	326	10	68	691	227 50	191 70
Carroll.....	90	125		114		74	403	120 00	107 75
Champaign.....	45	224	25	53	2	345	694	202 25	179 25
Clark.....	19	71	21	212	1	63	387	244 45	151 77
Clermont.....	50	203	6	375	5		639	146 20	112 55
Clinton.....	54	193	5	124	31	78	437	124 30	119 65
Columbiana.....	60	190		235	140		624	187 00	187 00
Coshocton.....	105	184	9	3	23	126	450	268 50	253 00
Crawford.....	99	135	10	215	60	3	522	258 25	185 75
E. Cuyahoga.....							173	112 20	66 80
W. Cuyahoga.....							90	187 45	107 85
Darke.....	158	395	9	518	19	118	1,217	378 53	359 84
Defiance.....	109	360	1	420	2	85	977	242 25	169 00
Delaware.....	19	23		6	3	2	53	23 50	22 50
Erie.....	31	154		141			326	169 00	119 90
Fairfield.....	118	316		140			574	392 50	373 50
Fulton.....	93	206	6	339	6	90	640	181 50	135 55
Geauga.....	65	135	19	200	7	72	498	211 15	149 80
Greene.....	311	157		178		192	838	346 75	344 75
Guernsey.....	150	362	20	396	106		1,044		
Hamilton.....	23	177		369		120	689	257 60	227 70
Hancock.....							99		45 00
Hardin.....	14	88		13	2	11	128	86 25	38 55
Harrison.....	21	62		272		19	374	87 15	47 60
Highland.....	20	45		33	4	113	224	59 30	30 66
Hocking.....							35	45 75	20 00
Jefferson.....	19	82	5	349	6	79	540	141 50	97 10
Knox.....	21	39		36	2		92	134 80	49 40
Lawrence.....	93			94		28	215	224 00	136 10
Licking.....	103	183	7	86		70	449	360 00	330 00
Logan.....	157	430	8	467	6	110	1,148	345 25	282 55
Lorain.....	8	114		99		10	231	128 40	61 75
Lucas.....	158	27	3	64	2	28	282	468 00	228 00
Madison.....	63	129		288	4	43	527	285 75	221 50
Mahoning.....	39	166		223	86		514	202 50	145 30
Marion.....	147	655	27	424	16	200	1,469	306 50	289 50
Medina.....	55	87	11	355	2	156	666	116 35	109 05
Meigs.....	27	50		134	16	130	357	157 00	74 00
Mercer.....									85 38
Miami.....	99	416	32	292	7	64	910	309 50	298 00
Monroe.....	12	14		73	16		115	95 00	36 25
Montgomery.....	549			1,819	8		2,376	619 00	611 00
Morgan.....	34	110		104			248	68 25	35 25
Morrow.....	120	135	7	444	60	96	862	145 50	100 00
Muskingum.....	36	129	20	70		57	312	359 00	214 00
Noble.....	12	21		211			244	125 00	84 75
Paulding.....	81	126		198	3	37	445	350 00	176 00
Perry.....	5	32		29		1	67	186 25	48 05
Pike.....	20	27		56			103	93 50	14 50
Portage.....	47	62	4	142	2	68	325	118 00	88 00
Preble.....	132	399	4	461		168	1,458	478 50	421 75
Putnam.....	500	100	5	600	10	200	1,415	520 00	381 00
Richmond.....	88	278	4			57	538	145 50	144 25
Sandusky.....							498	211 30	167 50
Scioto.....	15	78				88	181	97 20	42 80
Seneca.....	69	209		208	4	90	580	215 00	175 00
Shelby.....	283		9	512	11	88	903	167 75	141 75
Stark.....	55	161	2	212	7	72	509	327 95	255 35
Summit.....	273	377	18	192		97	957	425 50	321 85
Trumbull.....	32	95	5	183	2	37	354	243 25	124 92
Tuscarawas.....	66	23		64	5	4	162	147 00	103 00
Union.....	150	371		288	43		852	220 50	189 80

TABLE II—ENTRIES AND AWARDS—Continued.

Counties.	FARM PRODUCTS.								
	Grains and Seeds.	Vegetables.	Honey and Maple	Preserves and Canned Goods.	Butter and Cheese.	Culinary.	Total Number Entries.	Total amount premiums offered.	Total amount premiums awarded.
	No.	No.	No.	No.	No.	No.			
Van Wert.....	342	710	10	624	20	203	1,909	\$516 25	\$402 00
Warren.....	54	198	.....	468	194	.....	914	190 25	141 70
Washington.....	29	73	4	142	4	10	262	450 55	78 80
Wayne.....	52	129	2	97	2	43	325	244 30	191 95
Williams.....	123	72	.....	309	5	57	568	243 80	211 10
Wood.....	331	233	23	297	.....	176	1,060	523 75	465 00
Wyandot.....	69	132	.....	134	.....	.....	335	186 50	146 25

TABLE II—ENTRIES AND AWARDS—Continued.

COUNTIES.	FLOWERS.			WOMAN'S WORK.			FINE ARTS.		
	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.
Adams.....	85	\$37 50	\$32 50	284	\$150 00	\$110 00	52	\$35 00	\$27 00
Allen.....	236	169 00	91 75	136	127 75	92 25	416	300 00	100 00
Ashtabula...	265	117 65	69 40	552	175 00	166 00	333	145 00	135 95
Athens.....	410	135 00	97 00	.....	.....	.....	175	90 00	58 25
Auglaize.....	531	181 00	170 00	611	318 00	209 95	1,193	252 00	182 00
Belmont.....	84	99 25	20 00	393	205 25	81 50	69	30 00	12 25
Brown.....	368	110 00	90 50	458	76 25	73 25	70	15 50	14 50
Butler.....	196	117 50	92 70	1,030	184 00	163 80	442	133 00	117 45
Carroll.....	416	76 00	74 50	360	115 50	102 50	14	18 00	6 00
Champaign...	427	185 50	100 75	639	261 25	190 75	130	144 75	86 25
Clark.....	448	455 25	434 50	375	235 80	158 30	371	356 75	307 65
Clermont.....	589	206 25	145 00	409	77 25	74 25	213	78 50	76 75
Clinton.....	146	78 90	75 60	231	234 15	223 05	16	28 00	28 00
Columbiana...	218	127 00	114 00	235	76 00	67 00	34	22 00	19 00
Coshocton...	255	166 75	134 00	591	189 50	184 50	339	154 00	144 25
Crawford.....	121	73 25	64 00	1,681	503 00	479 20	.....	.....	.....
E. Cuyahoga..	388	78 60	99 10	809	173 15	145 65	63	52 50	33 50
W. Cuyahoga..	158	78 95	29 45	610	140 60	129 80	58	30 35	25 00
Darke.....	544	160 00	.....	.....	.....	.....	.....	.....	.....
Defiance.....	451	66 55	66 55	.....	.....	.....	613	312 10	130 25
Delaware.....	10	6 00	6 00	10	14 00	14 00	12	5 00	5 00
Erie.....	18	105 00	105 00	403	330 00	150 00	500	323 45	150 00
Fairfield.....	374	282 00	210 75	219	120 00	116 75	573	399 00	375 25
Fulton.....	344	133 00	101 25	1,359	414 35	305 65	235	211 35	139 75
Geauga.....	288	144 85	85 30	900	.....	178 45	192	126 00	95 00
Greene.....	181	92 75	128 75	233	109 50	102 50	681	335 75	307 50
Guernsey.....	406	.....	.....	978	.....	.....	284	.....	.....
Hamilton.....	262	448 75	432 00	472	119 25	116 25	286	133 25	125 50
Hancock.....	140	.....	64 25	286	186 00	132 70	200	186 25	132 70
Hardin.....	24	12 00	10 50	576	274 25	155 25	192	107 40	82 60
Harrison.....	140	31 00	24 00	112	35 00	32 50	51	23 50	15 50
Highland.....	71	17 15	3 55	164	111 95	41 15	.....	.....	.....
Hocking.....	.....	.....	.....	21	14 00	6 50	31	23 00	15 55
Jefferson.....	175	56 50	33 75	456	140 50	138 15	340	154 50	123 50
Knott.....	58	73 00	56 50	94	247 50	66 40	96	150 30	29 80
Lawrence.....	153	157 00	117 95	94	59 00	83 46	16	20 90	10 60
Licking.....	222	231 00	138 00	455	275 00	262 00	259	251 50	225 53
Logan.....	550	241 55	238 50	783	238 90	233 00	509	330 75	305 25
Lorain.....	353	89 25	73 25	125	160 00	121 00	50	125 00	98 50
Lucas.....	241	275 00	179 00	716	218 00	158 00	176	255 00	135 00
Madison.....	288	166 25	102 50	494	330 00	218 75	128	104 50	87 50
Mahoning.....	317	169 65	157 60	233	172 20	122 05	179	117 00	109 00
Marion.....	359	138 25	133 50	703	243 75	199 25	574	406 25	338 25
Medina.....	334	135 25	92 45	435	156 15	110 80	212	101 40	75 60
Meigs.....	90	47 00	29 00	100	80 00	80 00	2	25 00	2 00
Mercer.....	.....	.....	78 25	.....	.....	225 86	.....	.....	65 50
Miami.....	404	232 00	182 00	960	325 00	285 00	432	293 00	271 50
Monroe.....	40	55 00	31 00	134	125 00	24 00	13	25 00	3 50
Montgomery..	448	460 00	451 00	.....	273 00	191 00	.....	217 00	205 00
Morgan.....	113	51 00	18 25	73	36 00	18 50	10	23 00	3 00
Morrow.....	334	117 00	72 25	557	261 00	235 00	188	107 00	87 00
Muskingum...	80	298 00	105 00	.....	.....	.....	176	216 00	177 00
Noble.....	16	40 00	12 75	14	140 25	9 00	36	82 00	26 00
Paulding.....	175	114 00	50 00	200	205 00	110 00	102	110 00	30 00
Perry.....	108	168 25	74 75	72	95 25	27 75	20	37 50	14 50
Pike.....	18	19 50	4 25	112	80 50	69 00	10	9 75	2 50
Portage.....	288	188 00	83 70	153	140 00	67 80	68	110 00	110 00
Preble.....	294	114 25	95 25	923	200 25	176 25	611	276 50	263 50
Putnam.....	400	160 00	120 00	900	250 00	.....	650	300 00	.....
Richland.....	263	68 15	60 50	385	128 35	109 65	97	50 15	38 20
Sandusky.....	196	114 50	97 00	1,037	477 05	301 05	.....	.....	.....
Scioto.....	101	88 70	26 75	101	80 45	29 80	12	25 20	8 50
Seneca.....	277	160 00	133 00	664	400 00	274 00	167	156 00	126 00
Shelby.....	195	88 00	68 00	676	280 00	217 15	.....	.....	.....
Stark.....	331	304 50	147 55	260	150 50	123 45	139	268 00	205 00
Summit.....	864	445 75	215 25	803	273 60	184 50	347	172 90	134 25
Trumbull.....	206	107 50	56 30	426	71 55	67 25	154	74 25	62 00
Tuscarawas...	69	68 00	24 00	167	68 00	52 30	23	63 00	40 00
Union.....	295	145 00	82 00	378	104 00	91 25	162	110 00	78 00
Van Wert.....	785	197 50	132 25	761	274 75	210 50	218	244 00	131 25
Warren.....	158	103 90	54 10	662	102 50	88 50	382	60 00	45 40
Washington...	74	37 45	37 45	148	225 00	65 65	408	175 00	128 85
Wayne.....	126	83 25	64 05	919	328 00	257 05	243	156 00	117 00
Williams.....	532	125 00	97 50	1,118	250 95	213 35	341	163 11	147 60
Wood.....	364	178 00	110 50	310	209 00	167 08	296	190 75	154 75
Wyandot.....	103	55 00	37 40	.....	.....	.....	155	284 25	86 75

TABLE II—ENTRIES AND AWARDS—Concluded.

COUNTIES.	SCHOOL WORK.			MERCHANDISE.		
	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.	Total number entries.	Total amount premiums offered.	Total amount premiums awarded.
Allen.....	211	\$174 50	\$94 50	16	\$173 00	\$74 00
Athens.....	.....	150 00	150 00	.....	.....	.....
Champaign.....	596	245 75	152 00	14	42 00	21 00
Clark.....	.....	75 00	75 00	.....	.....	50 00
Clinton.....	27	45 00	45 00	29	70 00	70 00
Coshocton.....	19	50 00	50 00	5	109 00	28 00
Crawford.....	34	330 00	330 00	3	38 00	25 00
E. Cuyahoga.....	16	15 00	11 50	65	62 00	28 50
Darke.....	239	292 00	209 25	14	265 00	121 50
Defiance.....	34	30 05	16 50	6	63 00	40 00
Delaware.....	.....	.....	.....	29	5 00	5 00
Fairfield.....	3	9 00	4 50	.....	.....	.....
Fulton.....	75	100 00	60 00	4	75 00	40 00
Geauga.....	.....	15 00	.....	.....	.....	.....
Guernsey.....	.....	.....	.....	78	.....	.....
Hancock.....	.....	.....	.....	19	80 00	85 00
Hardin.....	.....	63 00	63 00	4	.....	.....
Knox.....	.....	.....	.....	7	.....	.....
Logan.....	.....	.....	.....	15	65 00	45 00
Lorain.....	.....	.....	.....	75	125 00	96 65
Lucas.....	47	132 00	73 00	13	.....	.....
Meigs.....	2	12 00	2 00	.....	.....	.....
Mercer.....	.....	150 00	150 00	.....	.....	.....
Montgomery.....	.....	.....	.....	.....	18 00	18 00
Morgan.....	.....	.....	.....	.....	16 75	.....
Morrow.....	1	65 00	65 00	.....	.....	.....
Paulding.....	.....	.....	.....	13	88 00	43 00
Preble.....	.....	.....	.....	6	72 00	54 00
Putnam.....	2,400	600 00	400 00	30	200 00	121 00
Richland.....	.....	.....	.....	12	74 00	16 10
Sandusky.....	.....	300 00	300 00	.....	.....	.....
Shelby.....	255	300 00	139 00	.....	.....	.....
Stark.....	19	34 75	30 00	6	75 00	15 00
Summit.....	18	10 50	4 00	.....	.....	.....
Van Wert.....	493	920 00	303 53	.....	.....	.....
Warren.....	42	134 00	82 00	.....	.....	.....
Washington.....	9	35 00	5 80	.....	.....	.....
Wayne.....	38	27 75	8 75	.....	.....	.....
Williams.....	600	400 00	242 00	.....	.....	.....
Wood.....	1,221	527 50	425 25	.....	.....	.....

TABLE III—PROPERTY, RECEIPTS, DISBURSEMENTS, ETC., OF COUNTY AGRICULTURAL SOCIETIES IN 1909.

Counties.	When Organized.	Number Members.	Number of Acres in Fair Grounds.	Are Ground Owned by Society, or Leased.	If Owned Cash Value.	Indebtedness, First Year.	Are Fair Grounds Buildings Insured.	Date of Annual Election.	Votes Cast.	Member of Ohio Fair Managers' Association.
Adams.....	1888	117	16½	Owned	\$1,800	\$2,100 00	No	Jan. 30	9	Yes
Allen.....	1860	246	30	Leased	.....	1,208 60	Yes	Jan. 5	76	Yes
Astabula.....	1858	190	30	Owned	7,500	1,647 24	Yes	Aug. 19	.....	Yes
Athens.....	1851	142	35	Owned	25,000	1,350 00	Yes	Feb. 13	65	Yes
Augetze.....	1866	.....	40	Owned	20,000	2,469 72	Yes	Jan. 16	92	Yes
Belmont.....	1848	110	17½	Owned	.....	.....	Yes	Aug. 25	25	Yes
Brown.....	1849	658	20	Owned	20,000	113 32	Yes	Jan. 23	328	Yes
Butler.....	.....	10	57	Owned	57,000	2,800 00	Yes	Oct. 6	268	Yes
Carroll.....	1850	.....	28	Owned	15,000	2,780 00	Yes	Nov. 20	.....	.....
Champaign.....	1840	84	50	Owned	5,600	400 00	Yes	Jan. 23	64	Yes
Clark.....	1852	10	40	Owned	50,000	2,384 99	Yes	Dec. 12	287	Yes
Clermont.....	1848	835	24	Owned	10,000	1,047 61	No	Aug. 27	163	Yes
Clinton.....	1904	284	30	Leased	.....	950 00	Yes	Aug. 20	208	Yes
Columbiana.....	1849	451	29	Owned	25,000	5,200 00	Yes	Nov. 6	112	Yes
Coshocton.....	1851	293	38	Owned	75,000	9,750 00	Yes	Jan. 10	67	Yes
Crawford.....	1852	260	30	Owned	20,000	3,600 00	Yes	Sept. 16	72	Yes
East Cuyahoga.....	.....	428	61.78	Owned	.....	.....	Yes	Jan. 30	.....	.....
West Cuyahoga.....	1894	190	23	Owned	32,000	3,000 00	Yes	Jan. 30	61	Yes
Darke.....	1852	10	50	Owned	43,000	.....	Yes	Aug. 27	1,595	Yes
Defiance.....	1909	32	34½	Leased	.....	.....	Yes	Jan. 16	18	Yes
Delaware.....	1909	68	20	Leased	.....	.....	Yes	Jan. 30	.....	Yes
Erie.....	1858	456	45	Leased	.....	.....	Yes	Dec. 4	37	Yes
Fairfield.....	1851	211	78	Owned	75,000	20,000	Yes	Jan. 30	.....	Yes
Fulton.....	1856	124	40	Owned	10,000	.....	Yes	Jan. 23	84	Yes
Geauga.....	1831	850	35	Owned	.....	.....	Yes	Jan. 30	65	Yes
Greene.....	1839	13	39	Leased	.....	.....	Yes	Jan. 30	752	Yes
Guernsey.....	1877	10	28	Owned	25,000	360 18	No	Jan. 30	.....	Yes
Hamilton.....	1855	963	47	Owned	100,000	2,000 00	Yes	Jan. 29	.....	Yes
Hancock.....	1842	10	70	Owned	2,500	587 00	No	Jan. 30	261	Yes
Hardin.....	1900	32	45½	Owned	6,000	2,000 00	Yes	Jan. 29	20	Yes
Harrison.....	1847	30	35	Leased	.....	.....	.....	Jan. 8	.....	Yes
Henry.....	1909	97	24	Leased	.....	.....	Yes	Jan. 3	.....	Yes
Highland.....	1908	74	20	Leased	.....	.....	.....	Dec. 29	20	Yes
Hocking.....	.....	77	26	Leased	.....	.....	.....	Jan. 30	88	.....
Jefferson.....	1853	509	13½	Leased	.....	750 00	Yes	Jan. 30	31	Yes
Knox.....	1909	80	.....	Leased	.....	675 00	.....	Sept. 25	32	.....
Lawrence.....	.....	.....	20	Owned	6,000	1,200 00	.....	Jan. 30	37	.....
Licking.....	1852	12	68	Owned	75,000	6,366 24	Yes	Oct. 30	216	.....
Logan.....	1848	400	37½	Owned	25,000	2,129 34	Yes	Jan. 28	125	Yes
Lorain.....	1845	200	31	Owned	60,000	.....	Yes	Jan. 28	49	Yes
Lucas.....	.....	61	43	Owned	80,000	.....	Yes	Jan. 9	23	Yes
Madison.....	.....	1,290	47	Owned	18,000	.....	Yes	Jan. 5	31	Yes



Mahoning.....	1846	192	45	Owned	12,000	2,200 00	Yes	Nov. 3	104	Yes
Marion.....	1851	378	47	Owned	35,000	18 30	Yes	Jan. 30	114	Yes
Medina.....	1845	785	27½	Owned	8,000	.....	No	Jan. 30	40	Yes
Mega.....	1855	35	70	Owned	10,000	3,000 00	No	Oct. 10	35	Yes
Mercer.....	1870	15	59	Owned	35,000	1,500 00	Yes	Aug. 20	621	Yes
Miami.....	1847	24	52	Owned	38,000	.....	Yes	November	.....	Yes
Monroe.....	1858	168	35	Owned	26,000	7,500 00	No	Jan. 30	28	Yes
Montgomery.....	1890	22	42	Owned	200,000	.....	Yes	Jan. 30	14	Yes
Morgan.....	1853	104	23½	Owned	3,000	1,250 00	No	Sept. 18	23	Yes
Morrow.....	1850	186	35	Owned	15,000	3,300 00	No	Jan. 29	.....	Yes
Muskingum.....	1846	.....	44	Owned	60,000	18,387 91	Yes	Jan. 30	18	No
Noble.....	1851	28	10½	Owned	2,000	.....	No	Sept. 3	21	Yes
Paulding.....	1872	42	33	Owned	13,000	2,700 00	Yes	Jan. 30	89	No
Perry.....	1894	155	20	Leased	.....	.....	Yes	Dec. 28	1,525	Yes
Pike.....	1907	64	40	Leased	10,000	2,377 87	Yes	Jan. 9	.....	No
Portage.....	1846	386	22½	Owned	10,000	10,000 00	Yes	Sept. 17	411	Yes
Preble.....	1850	13	43	Owned	25,000	2,000 00	No	Jan. 29	125	Yes
Putnam.....	1855	380	40	Owned	3,000	600 00	No	Oct. 2	17	Yes
Richland.....	.....	223	30	Owned	.....	4,900 00	Yes	Jan. 30	66	Yes
Sandusky.....	1852	1,850	46	Owned	30,000	2,000 00	No	Jan. 30	40	Yes
Sarato.....	1899	.....	30	Leased	.....	125 00	Yes	Jan. 30	40	Yes
Seneca.....	1902	275	45	Leased	.....	.....	Yes	November	.....	Yes
Shelby.....	.....	.....	43	Owned	25,000	.....	Yes	Jan. 2	44	Yes
Stark.....	1850	245	48	Owned	45,000	12,500 00	Yes	Jan. 15	.....	Yes
Summit.....	1849	400	47	Owned	50,000	15,000 00	Yes	Jan. 30	36	No
Tumbull.....	1845	301	37½	Owned	20,000	690 00	Yes	Jan. 30	140	No
Tuscarawas.....	1850	.....	29	Owned	40,000	9,000 00	Yes	Jan. 30	150	No
Union.....	1847	.....	50	Owned	12,000	5,000 00	Yes	Sept. 9	63	Yes
Van Wert.....	1856	66	54½	Owned	40,000	6,650 00	No	Oct. 1	25	Yes
Warren.....	1849	216	33	Leased	.....	737 00	Yes	Aug. 26	20	Yes
Washington.....	1851	342	32	Owned	25,000	16,000 00	Yes	Jan. 30	26	Yes
Wayne.....	1897	190	40	Owned	12,000	2,550 00	Yes	Sept. 10	39	Yes
Williams.....	1900	84	42½	Owned	15,000	2,000 00	No	Jan. 3	88	Yes
Wood.....	1881	183	61½	Owned	35,000	1,356 25	Yes	Jan. 30	.....	Yes
Wyandot.....	.....	.....	40	Leased	.....	.....	Yes	.....	.....	Yes



Mahoning	263 51	4,101 00	796 00	800 00	.....	192 10	865 00	.....	775 00	2,085 55
Marion	132 00	4,582 25	644 81	573 06	.....	301 80	1,525 00	.....	1,533 10	197 00
Medina	160 61	3,128 60	321 60	439 16	.....	76 00	548 83	.....	623 50	122 76
Mega.	119 08	2,105 60	232 86	572 40	.....	51 00	189 00	30 00	830 00	.....
Mercer	364 40	4,863 00	1,235 90	800 42	1,106 04	.....	1,146 84	210 75	1,249 98	116 00
Miami	3,366 33	5,324 25	1,048 50	960 00	.....	124 40	1,817 60	.....	2,130 75	251 95
Monroe	183 74	1,834 13	228 50	840 62	.....	72 90	860 00	.....	413 60	258 55
Montgomery	2,271 84	8,864 40	1,780 75	800 00	.....	311 75	1,840 00	125 25	4,262 00	580 00
Morgan	18 28	1,018 65	.....	358 10	772 80	104 00	220 00	.....	286 75	2 80
Morrow	49 25	2,942 70	.....	357 53	300 00	.....	1,312 13	.....	906 55	883 86
Muskingum	6 11	3,822 75	.....	800 00	1,705 67	.....	735 00	.....	987 25	2,537 56
Noble	368 32	638 30	.....	550 53	730 92	118 16	160 00	.....	201 00	16 00
Paulding	34 90	2,679 10	380 75	636 82	.....	130 45	415 00	48 50	912 50	95 00
Perry	264 51	1,169 30	164 55	636 82	.....	133 90	330 00	.....	361 50	1,600 00
Pike	.....	1,023 65	215 05	363 44	.....	157 35	387 50	.....	388 70	1,230 00
Portage	647 97	1,650 60	208 25	584 92	111 00	118 70	324 87	25 00	414 50	1,524 67
Preble	.....	5,253 00	1,165 60	474 76	961 94	46 00	515 00	218 25	1,455 50	7 20
Putnam	245 61	6,708 95	.....	650 50	1,814 47	215 20	889 50	218 50	1,976 86	.....
Richland	13 88	1,494 75	232 75	800 00	.....	91 80	1,026 00	.....	374 50	2,471 10
Sandusky	272 73	4,368 75	363 25	686 22	1,000 00	265 00	597 50	.....	825 00	238 39
Scioto	79 21	634 05	149 00	600 00	.....	32 23	194 00	.....	324 00	85 81
Seneca	.....	3,491 00	472 00	800 00	.....	123 85	535 00	.....	972 00	.....
Shelby	.....	3,942 00	897 00	492 50	.....	.....	1,245 00	118 55	1,229 95	173 30
Stark	.....	2,391 00	162 10	800 00	1,000 00	490 85	277 00	.....	1,776 53	3,382 30
Summit	1,364 30	11,357 25	859 00	800 00	.....	583 45	1,790 00	.....	1,915 00	1,070 50
Tuscarawas	16 05	3,177 10	1,015 65	800 00	.....	4 00	575 00	.....	886 90	470 76
Union	199 60	2,218 25	139 25	800 00	.....	77 75	900 00	147 10	981 00	1,200 00
Van Wert	67 86	3,222 25	473 40	446 84	467 41	61 30	372 50	69 00	765 50	2,413 60
Warren	63 40	6,424 40	1,164 00	607 88	1,000 00	116 90	1,496 25	258 00	2,200 50	2,039 82
Washington	32 60	2,317 40	87 25	511 63	.....	87 00	1,072 50	50 00	875 90	1,139 60
Wayne	2 53	3,705 40	745 90	800 00	.....	.....	582 25	.....	740 00	1,638 50
Williams	18 48	1,797 50	261 00	757 40	.....	372 65	967 50	.....	431 45	1,382 55
Wood	122 53	3,968 30	559 25	496 06	1,000 00	601 60	4,240 00	107 50	3,107 00	1,039 41
Wyandot	1 25	1,429 65	98 50	422 00	.....	135 65	.....	.....	411 50	75 00

TABLE III—PROPERTY, RECEIPTS, DISBURSEMENTS, ETC., OF COUNTY AGRICULTURAL SOCIETIES  
IN 1909—Continued.

Counties.	Amount paid premiums, Class.	Amount paid premiums, Speed.	Amount paid newspapers Advertising	Amount paid Other Advertising	Amount paid Printing.	Amount paid Supplies.	Amount paid Postage.	* Amount paid Special attractions.	Amount paid Music.	Amount paid Judges.	Amount paid Police force.
Adams.....	\$2,030 25	\$1,060 25	\$60 00	\$50 00	\$109 40	\$25 25	\$5 00	...	\$100 00	\$58 80	\$22 00
Allen.....	2,215 00	2,215 00	177 00	258 47	398 75	55 90	98 00	...	324 15	90 00	188 10
Ashtabula.....	2,335 85	2,000 00	333 00	123 54	92 05	21 48	32 50	...	272 00	146 50	132 52
Athens.....	793 01	2,360 00	368 61	368 61	25 00	20 00	30 00	...	100 00	75 00	100 00
Auglaize.....	1,556 45	2,120 00	375 22	310 00	41 00	32 50	14 07	...	110 00	168 30	158 00
Belmont.....	986 75	1,050 00	101 00	51 00	60 05	49 65	4 50	...	134 40	88 20	46 00
Brown.....	1,620 50	...	115 50	93 30	...	...	1 00	...	150 00	82 70	63 00
Buier.....	2,775 82	3,425 00	214 95	30 00	153 50	227 45	30 00	...	129 00	167 50	177 00
Carroll.....	1,368 80	1,209 50	138 25	28 50	27 18	27 18	27 17	...	125 00	65 75	76 80
Champaign.....	1,962 05	3,355 00	255 38	134 29	115 84	45 60	41 72	...	165 00	136 70	76 50
Clark.....	3,469 42	4,190 00	402 60	410 26	290 00	693 55	60 80	...	3,084 47	310 35	650 75
Clermont.....	1,414 05	1,000 00	45 00	50 75	38 50	33 45	10 00	...	85 00	67 25	61 00
Clinton.....	1,203 05	1,875 50	63 20	425 80	43 50	27 80	24 00	...	210 00	55 70	110 00
Columbiana.....	1,131 75	1,850 00	114 89	...	233 60	...	24 76	...	196 00	35 10	125 50
Coshocton.....	3,225 00	1,783 00	225 90	54 15	146 80	24 35	16 80	...	200 00	216 40	157 25
Crawford.....	2,420 05	1,997 50	87 80	88 90	143 40	18 10	30 60	...	225 50	106 00	104 00
East Cuyahoga.....	1,518 01	1,295 00	47 20	...	48 81	150 98	6 93	...	75 00	45 00	151 20
West Cuyahoga.....	1,088 05	1,577 50	37 86	92 92	17 05	81 00	17 59	...	112 95	94 35	77 50
Darke.....	4,069 89	2,590 00	475 25	960 88	225 00	250 00	25 00	...	686 00	199 75	154 00
Defiance.....	1,039 55	1,778 70	225 10	111 75	64 00	110 97	39 67	...	326 17	161 05	63 25
Delaware.....	105 50	110 00	65	60 20	31 75	...	11 81	...	75 00	...	9 40
Erie.....	1,016 90	2,220 00	339 82	253 21	203 89	169 00	29 50	...	90 00	99 80	89 00
Fairfield.....	3,470 25	2,900 00	560 00	200 00	415 00	115 00	200 00	...	100 00	225 00	210 00
Fulton.....	1,635 00	1,130 00	39 30	68 00	93 50	37 50	8 50	...	35 00	74 50	28 25
Geauga.....	1,517 00	1,453 00	59 30	9 50	117 65	144 27	23 38	...	75 00	77 00	116 25
Greene.....	2,880 70	3,200 00	375 00	110 00	284 00	50 00	29 10	...	600 00	180 00	113 25
Guernsey.....	1,339 55	910 00	6 20	22 20	13 00	31 95	15 00	...	75 00	252 25	57 00
Hamilton.....	3,168 86	3,736 50	556 39	558 81	27 60	185 74	55 71	...	850 00	175 85	233 75
Hancock.....	1,872 15	1,975 00	180 00	200 00	180 00	35 00	22 14	...	100 00	110 00	91 00
Hardin.....	1,086 75	2,800 00	134 85	135 75	43 25	121 28	18 50	...	46 00	78 00	91 75
Harrison.....	580 10	850 00	34 35	10 00	25 00	29 10	12 00	...	60 00	37 90	36 00
Highland.....	402 81	866 50	10 60	29 50	76 10	20 60	12 00	...	240 00	56 00	36 00
Hocking.....	420 00	1,400 00	20 00	156 00	9 75	5 00	11 00	...	50 00	30 00	48 00
Jefferson.....	1,844 50	1,560 00	83 50	100 00	121 65	20 00	8 66	...	115 00	98 00	75 00
Knox.....	672 85	1,564 75	87 45	205 22	...	115 81	15 80	...	77 00	18 10	24 00
Lawrence.....	432 36	666 75	...	88 45	...	6 43	6 43	...	...	...	39 38
Licking.....	2,776 80	2,897 00	173 21	27 00	87 80	161 75	20 00	...	156 00	111 00	103 50
Lorain.....	2,983 65	2,937 50	190 05	300 50	236 95	11 45	35 86	...	229 60	204 65	187 00
Lucas.....	1,496 65	2,492 50	115 70	135 00	10 25	79 15	13 00	...	194 00	80 00	182 00
Madison.....	3,208 66	6,201 00	377 74	2,664 17	249 00	312 90	150 76	...	432 00	378 45	416 00
Mahoning.....	2,576 75	3,590 00	55 50	70 90	124 00	68 00	15 00	...	223 00	79 90	156 00
...	2,030 95	1,970 00	100 00	54 00	160 00	15 00	15 00	...	125 00	85 00	65 00

Marion.....	3,043 25	2,980 00	265 00	207 06	133 90	4 00	40 18	400 00	115 00	153 00	166 25
Medina.....	1,607 30	1,360 33	55 00	88 80	48 50	170 70	10 00	100 00	196 00	110 00	63 25
Meigs.....	1,775 00	900 00	200 00	60 00	200 00	180 00	20 00	350 00	63 00	37 50	170 00
Mercer.....	2,931 98	3,022 50	347 00	427 00	115 25	153 78	120 78	150 00	180 00	111 45	160 00
Miami.....	3,259 50	3,185 00	73 00	123 45	62 25	114 25	21 00	225 00	200 00	158 00	195 25
Monroe.....	3,658 75	1,940 00	39 75	40 20	89 00	80 45	9 00	.....	121 50	37 50	63 00
Montgomery.....	4,200 00	10,720 00	400 00	999 00	350 00	100 00	50 00	850 00	173 00	220 00	410 00
Morgan.....	594 81	650 00	31 97	40 00	6 00	24 30	6 00	.....	50 00	69 00	20 00
Morrow.....	1,612 25	2,300 00	66 00	180 00	110 00	45 00	5 10	.....	137 90	133 25	76 00
Muskingum.....	1,835 01	2,380 00	592 90	272 43	28 80	59 80	32 00	30 00	224 00	157 75	243 50
Noble.....	1,430 50	400 00	5 20	35 00	27 00	3 00	8 00	100 00	60 00	34 00	30 50
Paulding.....	1,234 10	1,437 50	40 00	248 82	80 00	69 04	43 00	450 00	50 00	69 70	156 25
Perry.....	553 65	1,600 00	67 74	169 20	.....	.....	10 20	.....	90 00	50 00	86 00
Pike.....	517 75	1,113 50	101 00	298 54	15 50	35 00	24 63	58 00	112 50	.....	26 25
Portage.....	1,193 00	1,118 95	200 11	36 50	127 00	540 55	6 04	149 24	60 00	4 00	60 00
Preble.....	3,438 00	2,980 00	176 79	140 20	334 50	487 00	20 00	525 00	300 00	221 65	280 00
Putnam.....	4,000 00	2,086 73	234 50	500 00	372 91	237 08	123 64	.....	300 00	120 00	142 00
Richland.....	1,073 70	1,974 00	108 80	273 70	.....	22 70	10 50	107 50	90 00	45 35	55 46
Sandusky.....	3,530 60	1,877 50	200 00	245 00	174 87	206 46	36 00	300 00	150 00	208 50	266 00
Scioto.....	376 95	1,758 00	.....	53 44	6 56	10 78	7 00	80 00	56 70	29 10	33 00
Seneca.....	1,836 00	2,900 00	101 73	314 95	.....	61 00	10 00	850 00	153 80	132 25	87 00
Shelby.....	1,524 10	2,795 00	141 42	258 60	246 21	34 05	24 00	.....	104 00	132 25	87 00
Stark.....	2,133 55	1,367 00	116 50	95 63	.....	347 30	19 00	166 50	133 50	214 80	384 00
Summit.....	3,732 30	3,300 00	449 05	248 12	204 75	161 32	102 82	275 00	200 00	52 00	29 80
Tuscarawas.....	1,069 17	1,628 34	85 18	104 10	132 25	45 34	21 01	125 00	60 00	66 25	18 50
Trumbull.....	1,739 45	1,327 25	284 49	373 67	12 40	24 80	37 00	162 00	65 00	106 00	152 70
Union.....	1,470 43	1,797 25	150 00	220 50	261 58	.....	112 34	400 00	292 00	174 00	135 00
Van Wert.....	4,055 23	3,450 00	85 50	118 00	.....	45 00	18 75	225 00	180 00	69 00	61 00
Warren.....	1,170 92	1,970 00	207 87	51 49	100 00	8 30	30 00	15 00	143 60	110 95	878 25
Washington.....	1,808 97	2,391 16	233 45	60 00	176 10	22 10	10 50	.....	170 00	177 95	52 50
Wayne.....	1,922 75	2,100 00	135 10	.....	150 00	142 90	10 50	383 00	165 00	132 90	150 75
Williams.....	1,756 00	1,408 60	215 00	.....	200 00	66 54	44 00	.....	226 00	231 00	144 00
Wood.....	4,187 01	7,200 00	75 00	399 01	.....	19 00	6 00	350 00	50 00	13 00	21 00
Wyandot.....	811 20	507 75	.....	50 00	.....	.....	.....	.....	.....	.....	.....



Logan.....	73 15	300 00	100 00	234 85	638 46	859 50	2,129 34	130 95	.....
Lorain.....	.....	180 00	75 00	175 00	1,580 60	928 66	882 71	966 87	.....
Lucas.....	10 66	427 50	.....	836 65	3,665 72	14,301 62	.....	.....	4 74
Madison.....	10 00	100 00	.....	202 75	1,523 84	.....	.....	.....	.....
Mahoning.....	25 00	300 00	150 00	300 00	1,428 77	500 00	2,200 00	194 63	.....
Marion.....	20 00	200 00	60 00	134 50	352 83	621 00	18 30	285 46	.....
Medina.....	14 25	100 00	50 00	16 00	521 98	341 49	.....	584 46	.....
Meigs.....	12 00	200 00	100 00	26 00	200 00	472 79	3,000 00	440 00	.....
Mercer.....	330 00	392 88	75 00	166 25	415 00	628 45	800 00	457 20	.....
Miami.....	240 00	200 00	100 00	308 25	1,518 18	628 45	7,500 00	4,452 10	.....
Monroe.....	19 25	90 00	25 00	100 50	625 64	555 00	.....	.....	.....
Montgomery.....	16 00	600 00	25 00	138 00	.....	1,639 00	.....	5,701 88	.....
Morgan.....	5 00	60 00	25 00	.....	323 03	.....	107 50	878 47	.....
Morrow.....	11 00	125 00	35 00	.....	1,161 65	516 34	.....	22 65	.....
Muskingum.....	174 70	250 00	37 00	155 30	485 11	758 64	2,982 21	2 35	95
Noble.....	10 00	50 00	50 00	198 75	128 75	164 12	.....	.....	207 75
Paulding.....	52 80	103 91	50 00	156 60	487 97	224 76	1,490 41	652 53	210 05
Perry.....	37 00	125 00	30 00	48 00	134 18	1,455 64	.....	79 94	.....
Pike.....	.....	.....	.....	95 00	.....	237 02	2,798 00	.....	323 00
Portage.....	8 55	100 00	25 00	189 35	693 59	.....	590 51	808 09	.....
Preble.....	21 00	225 00	75 00	374 65	19 62	404 25	561 80	.....	.....
Putnam.....	.....	300 00	50 00	164 00	896 34	2,629 69	39 70	178 74	.....
Richland.....	10 00	175 00	12 00	37 00	1,263 14	49 44	800 00	228 32	.....
Sandusky.....	15 00	200 00	25 00	80 00	1,500 94	.....	4,900 00	740 28	1,000 00
Scioto.....	.....	50 00	5 00	35 10	176 35	30 69	184 15	17 93	69 16
Seneca.....	15 00	230 00	.....	.....	56 00	1,302 00	.....	.....	.....
Shelby.....	44 90	300 00	125 00	211 90	1,111 62	15 50	892 00	.....	.....
Stark.....	8 00	300 00	25 00	119 00	49 00	373 68	2,400 00	291 37	.....
Summit.....	.....	300 00	250 00	849 50	3,243 26	3,092 91	528 50	1,810 94	.....
Tribull.....	51 60	150 00	60 00	289 83	148 01	598 70	680 00	1,615 93	.....
Tuscarawas.....	21 00	300 00	40 00	27 00	757 16	1,709 25	.....	385 53	.....
Union.....	179 00	200 00	.....	175 00	1,596 33	.....	4,308 58	18 26	475 00
Van Wert.....	222 00	200 00	75 00	375 75	1,131 79	322 93	3,763 76	76 72	.....
Warren.....	20 08	100 00	.....	125 50	1,171 62	500 00	552 49	.....	780 98
Washington.....	22 00	300 00	35 00	375 30	1,556 07	745 46	929 38	144 78	1,200 00
Wayne.....	11 35	200 00	.....	66 56	303 52	1,723 81	.....	.....	.....
Williams.....	.....	300 00	50 00	208 40	475 54	275 00	275 00	530 97	.....
Wood.....	371 70	360 00	.....	403 62	1,901 89	1,172 10	1,000 00	.....	.....
Wyandot.....	.....	100 00	20 00	72 00	100 00	13	170 00	.....	.....

TABLE III—PROPERTY, RECEIPTS, DISBURSEMENTS, ETC., OF COUNTY AGRICULTURAL SOCIETIES  
IN 1909—Continued.

Counties.	Total Num- ber of Ex- hibitors.	Date of Payment of Pre- miums.	Are En- tries Open or Confined to County?	How are Premium Awards Published?	Do You Publish Annual Financial Statement?	Do You Sell Family Tickets?	Cost of Member- ship Ticket	Number of Premium Lists Issued	What Charge is Made for Merchants' Exhibit Space.	What Charge is Made for Machinery Exhibit Space.
Adams.....	560	After Fair	Open	Newspapers	Yes	Yes	\$1 50	2,000	None	None
Allen.....	284	Oct. 22	Open	Newspapers	Yes	No	1 00	4,000	None	None
Ashtabula.....	169	Aug. 26	Open	Newspapers	Yes	No	1 00	12,000	None	None
Athens.....	150	Sept. 1	Open	Statement	Yes	No	1 00	2,000	None	None
Auglaize.....	196	Sept. 3	Closed	Newspapers	Yes	No	1 00	5,000	\$2 00	None
Belmont.....	105	.....	Open	Newspapers	Yes	No	1 00	1,000	None	None
Brown.....	189	After Fair	Open	Newspapers	Yes	Yes	1 50	1,800	None	None
Butler.....	165	After Fair	Open	Newspapers	Yes	Yes	1 00	5,000	None	None
Cambridge.....	288	Oct. 1	Open	Newspapers	Yes	No	1 00	2,500	None	None
Champaign.....	177	After Fair	*Closed	Newspapers	Yes	Yes	1 00	2,300	None	None
Clark.....	110	Sept. 20	Open	Newspapers	Yes	Yes	1 00	2,500	None	None
Clermont.....	253	Aug. 27	Open	No	Yes	Yes	1 25	3,500	\$1 00	None
Columbiana.....	152	Aug. 20	Open	Newspapers	Yes	Yes	1 00	4,000	None	None
Coshocton.....	167	Sept. 30	Open	Newspapers	Yes	No	1 00	3,000	None	None
Crawford.....	166	Oct. 14	Open	No	Yes	No	1 00	2,300	None	None
East Cuyahoga.....	165	After Fair	Open	Newspapers	Yes	No	1 00	2,500	None	None
West Cuyahoga.....	295	Sept. 22	Open	No	Yes	Yes	1 00	1,400	None	None
Darke.....	282	Aug. 27	Open	No	Yes	Yes	1 00	4,000	None	None
Defiance.....	198	Oct. 6	Open	Newspapers	Yes	Yes	1 00	1,500	None	None
Delaware.....	325	Sept. 22	Open	Newspapers	Yes	Yes	1 00	800	\$5 00	None
Erie.....	180	Oct. 12	Open	Newspapers	Yes	Yes	1 00	10,000	M. T.	None
Fairfield.....	230	Oct. 16	Open	Newspapers	Yes	No	1 00	2,500	None	None
Fulton.....	220	Oct. 15	Open	Newspapers	Yes	No	1 00	2,500	None	None
Gauga.....	410	Nov. 30	Open	Newspapers	No	Yes	1 00	3,000	None	None
Greene.....	149	Aug. 7	Open	Newspapers	Yes	No	1 50	2,000	None	None
Guernsey.....	104	Dec. 1	Open	Newspapers	Yes	Yes	1 00	2,500	\$1 00 pr. ft	None
Hamilton.....	102	Sept. 28	Open	Newspapers	Yes	Yes	1 00	2,000	\$1 00	None
Hancock.....	119	Dec. 20	Open	Newspapers	Yes	Yes	1 00	2,000	None	None
Hardin.....	119	.....	Open	Newspapers	Yes	No	1 00	1,500	None	None
Harrison.....	249	Nov. 6	Open	Newspapers	Yes	No	1 00	3,000	None	None
Henry.....	188	Dec. 15	Open	Newspapers	Yes	Yes	1 00	2,000	None	None
Highland.....	80	Oct. 9	Open	Newspapers	No	Yes	1 00	500	None	None
Hocking.....	146	Sept. 25	Closed	Newspapers	Yes	Yes	1 00	2,000	None	None
Jefferson.....	325	Sept. 17	Both	Newspapers	Yes	No	1 00	3,000	None	None
Knox.....	146	Oct. 15	Open	Newspapers	Yes	No	1 00	2,000	None	None
Lawrence.....	146	Oct. 15	Both	Newspapers	Yes	No	1 00	3,000	None	None
Licking.....	146	Sept. 10	Open	Newspapers	Yes	No	1 00	2,000	None	None
Logan.....	325	Sept. 10	Open	Newspapers	Yes	No	1 00	2,000	None	None



Lorain.....	82	Oct. 10	Open	Newspapers	Yes	No	1 00	1,500	None	None
Lucas.....	324	Nov. 1	Open	No	Yes	No	1 00	6,000	None	None
Madison.....	204	Sept. 1	Both	Newspapers	Yes	No	1 00	3,000	None	None
Mahoning.....	120	Nov. 3	Open	Newspapers	Yes	No	1 50	6,000	None	None
Marion.....	229	Jan. 1	Both	No	Yes	No	1 00	2,000	None	None
Medina.....	242	Sept. 11	Open	Newspapers	Yes	No	1 00	2,500	None	None
Mercer.....	262	Sept. 20	Open	Newspapers	Yes	Yes	1 00	1,200	None	None
Miami.....	345	Oct. 2	Open	Newspapers	Yes	Yes	1 00	4,000	None	None
Monroe.....	601	Oct. 2	Open	Newspapers	Yes	Yes	1 00	3,000	None	None
Montgomery.....	485	Sept. 20	Open	Newspapers	Yes	No	1 00	1,000	None	None
Morgan.....	82	Oct. 2	Both	Newspapers	No	No	1 00	1,300	M. T.	M. T.
McClure.....	200	Sept. 18	Closed	Newspapers	Yes	No	1 00	2,500	None	None
Muskingum.....	129	Oct. 1	Both	Newspapers	Yes	No	1 00	1,000	None	None
Noble.....	131	Oct. 10	Open	No	Yes	No	1 00	3,000	None	None
Paulding.....	153	Sept. 3	Open	Yes	Yes	No	1 25	2,000	None	None
Perry.....	47	Jan. 20	Open	Catalogue	Yes	No	1 00	4,000	None	None
Pike.....	93	Aug. 13	Open	Newspapers	No	Yes	1 00	2,000	None	None
Portage.....	110	Nov. 1	Open	Newspapers	Yes	Yes	1 00	3,500	\$5 to \$15	None
Preble.....	214	Sept. 17	Open	Newspapers	Yes	Yes	1 00	3,500	None	None
Putnam.....	200	Dec. 1	Both	Newspapers	Yes	No	1 00	1,200	None	None
Richland.....	72	Oct. 6	Both	Newspapers	Yes	Yes	1 00	3,000	M. T.	M. T.
Sandusky.....	228	Nov. 2	Both	No	Yes	No	1 00	1,200	None	None
Scioto.....	150	Aug. 28	Both	Newspapers	Yes	Yes	1 00	3,000	\$2 to \$10	None
Seneca.....	138	Sept. 15	Both	No	Yes	Yes	1 00	2,200	None	None
Shelby.....	291	Sept. 25	Both	Newspapers	Yes	Yes	1 00	4,000	None	None
Stark.....	134	Oct. 18	Both	Newspapers	Yes	No	1 00	5,000	5c. sq. ft.	None
Summit.....	82	Oct. 2	Open	Newspapers	Yes	No	1 00	2,000	None	None
Trumbull.....	472	Oct. 25	Both	Newspapers	Yes	No	1 50	1,800	None	None
Tuscarawas.....	404	November	Both	Catalogue	Yes	Yes	1 00	6,000	\$2 00	2 00
Union.....	145	Sept. 10	Both	No	Yes	Yes	1 00	4,000	None	None
Van Wert.....	108	Oct. 10	Open	No	Yes	Yes	1 00	3,000	None	None
Warren.....	154	Dec. 8	Both	Newspapers	Yes	No	1 00	1,800	None	None
Washington.....	154	Nov. 1	Open	.....	Yes	No	1 00	3,500	\$5 00	None
Wayne.....	231	Oct. 1	Open	.....	Yes	No	1 00	2,000	None	None
Williams.....	237	Oct. 1	Open	Newspapers	Yes	No	1 00	1,800	None	None
Wood.....	67	Dec. 1	Both	No	.....	Yes	1 00	2,000	M. T.	None
Wyandot.....	67	Dec. 1	Both	.....	.....	Yes	1 00	2,000	M. T.	None

TABLE III—PROPERTY, RECEIPTS, DISBURSEMENTS, ETC., OF COUNTY AGRICULTURAL SOCIETIES  
IN 1909—Concluded.

Counties.	Do You Have Grange Exhibits?	Do You Have an Educational Hall?	What is Nature of Premiums in Educational Department?	Do You Have Ladies and Children's Day?	Do County Commissioners Furnish Office Room?	Has Society Complied with Laws of Ohio and State Board of Agriculture?	Was Prescribed Oath Administered to Officers and Directors?	Does Society Hold Summer Picnic?	Member of Which Trotting Association?
Adams.....	No	No	Cash	Children's	Yes	Yes	Yes	No	None
Allen.....	Yes	Yes	.....	No	Yes	Yes	Yes	No	American
Ashabula.....	No	No	.....	No	No	Yes	Yes	Yes	National
Athens.....	Yes	Yes	School books	Yes	Yes	Yes	Yes	Yes	National
Auglaize.....	Yes	No	.....	Yes	No	Yes	Yes	No	American
Belmont.....	No	No	.....	No	No	Yes	Yes	No	National
Brown.....	No	No	.....	No	Yes	Yes	Yes	No	None
Butler.....	No	No	School books	No	Yes	Yes	Yes	No	American
Carroll.....	No	.....	.....	Yes	Yes	Yes	Yes	No	American
Champaign.....	Yes	Yes	Cash	Yes	No	Yes	Yes	No	American
Clark.....	No	Yes	Books	Children's	No	Yes	Yes	No	American
Clermont.....	No	No	.....	No	No	Yes	Yes	No	American
Clinton.....	No	Yes	Cash.	Yes	No	Yes	Yes	No	American
Columbiana.....	.....	.....	.....	No	Yes	Yes	No	No	National
Coshocton.....	No	Yes	Cash	Children's	Yes	Yes	Yes	No	American
Crawford.....	Yes	Yes	Cash	No	Yes	Yes	Yes	No	American
East Cuyahoga.....	Yes	.....	.....	No	Yes	Yes	Yes	No	National
West Cuyahoga.....	Yes	No	.....	No	Yes	Yes	Yes	No	American
Defiance.....	Yes	Yes	Cash	No	Yes	Yes	Yes	No	American
Delaware.....	Yes	Yes	Special	Yes	No	Yes	Yes	No	American
Erie.....	No	Yes	.....	Children's	No	Yes	Yes	Yes	None
Fairfield.....	Yes	Yes	Books	Yes	Yes	Yes	Yes	Yes	National
Fulton.....	Yes	No	.....	No	No	Yes	Yes	No	National
Gauga.....	Yes	No	Cash	No	No	Yes	Yes	No	American
Greene.....	No	Yes	.....	C. & S.	No	Yes	Yes	No	American
Guernsey.....	No	No	.....	Yes	No	Yes	Yes	No	National
Hamilton.....	No	No	.....	No	No	Yes	Yes	No	National
Hancock.....	No	No	.....	Yes	No	Yes	Yes	No	American
Hardin.....	Yes	No	Books	Children's	No	Yes	Yes	No	American
Harrison.....	.....	No	.....	No	.....	Yes	Yes	No	National
Henry.....	No	No	.....	Yes	No	Yes	Yes	No	American
Highland.....	No	Yes	Cash and Books	Yes	Yes	Yes	Yes	No	American
Hocking.....	No	No	.....	No	No	Yes	Yes	No	American
Jefferson.....	No	No	.....	No	No	Yes	Yes	No	National

### REPORT OF COUNTY SOCIETIES.

Knox.....	No					American
Lavrence....	No					American
Licking.....	No					American
Logan.....	Yes	Books				National
Lorain.....	No					American
Lucas.....	No	Cash				American
Madison....	Yes					American
Mahoning...	No					American
Marlon.....	No					American
Medina.....	No					American
Meigs.....	No					American
Mercer.....	Yes	Books				American
Miami.....	No		Children's			American
Monroe....	No		Children's			American
Montgomery	No		Children's			American
Morgan.....	No		Children's			American
Morrow....	No	Cash	No			American
Muskingum..	Yes	Books	Yes			American
Noble.....	No		No			American
Paulding...	No		Children's			American
Perry.....	No		Children's			American
Pike.....	Yes		No			American
Portage....	Yes		Children's			American
Preble.....	No		Children's			American
Putnam.....	Yes		Children's			National
Richland...	No	Books	Children's			National
Randsuky...	No	Books	Children's			American
Scioto.....	No		No			American
Seneca.....	No		No			American
Shilby.....	Yes	Cash	Children's			American
Stark.....	Yes	Cash	Children's			American
Summit....	No		No			National
Trembull...	Yes		Children's			American
Tuscarawas.	No		Children's			American
Union.....	Yes		No			American
Van Wert...	Yes	Books	Children's			American
Warren.....	No	Books	Children's			American
Washington.	No	Cash	Yes			American
Wayne.....	No	Cash	Children's			American
Williams...	Yes	Books	Children's			American
Wood.....	No	Cash	No			American
Wyandot...	Yes		Children's			American



# BULLETIN OF AWARDS

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## Ohio State Fair---1909

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Herein are Ohio State Fair Premium awards 1909.

The Exposition was a success.

Thanks to those who helped to make it so.

The many kind things said about it by the agricultural press, both in and out of the state, are appreciated.

Attendance greater than ever before.

Friday's rain made it practically a four-day fair.

Annually it assumes larger proportions and wider scope.

Departments were filled to overflowing.

Rentals for tents for overflows amounted to almost one thousand dollars.

Citizens of the Capital City promoted "Columbus Day" with success.

Ohio newspaper generosity was the corner-stone of increased interest and attendance.

The hearty support of county fair officials was a strong factor in making the fair in all respects greater than ever before.

Educational value is the prime object of the Ohio State Fair.

Better wages can be made by attending it than can be made staying at home.

Many new features were commented upon, especially the splendid exhibits by the various state institutions.

Ohio is not at the foot of the class.

In peace or in war, her quota is always full.

Respectfully,  
OHIO STATE BOARD OF AGRICULTURE.



# List of Premium Awards

## Ohio State Fair---1909

### FIRST DEPARTMENT—HORSES

C. H. GANSON, Member in Charge.

B. I. JONES.....Superintendent  
ALBERT JONES.....Assistant Superintendent  
J. A. KNAPP.....Clerk

#### JUDGES.

J. DICKINSON, C. A. TOPE, W. H. BALDRIDGE, J. B. LINDSEY, D. L. SAMPSON,  
C. M. MILLER, P. N. WRIGHT, C. BORDWELL, G. K. BRADFORD,

Received from stall rent, 1909.....\$842 00  
Premiums offered, 1909.....4,204 00  
Premiums paid, 1909.....2,960 00  
Premiums offered on ponies, 1909.....645 00  
Premiums paid on ponies, 1909.....637 00  
Paid superintendents, judges, etc., 1909.....360 00

Received from stall rent, 1908.....\$966 90  
Premiums offered, 1908.....3,583 00  
Premiums paid, 1908.....2,530 00  
Premiums offered on ponies, 1908.....533 00  
Premiums paid on ponies, 1908.....522 00  
Paid superintendents, judges, etc., 1908.....494 50

#### ROADSTERS—STANDARD BRED.

Name of Owner.	Postoffice.	Awards.	Amount.
Olentangy Stock Farm.....	Columbus, O., Sta. B	Best Stallion 4 Years or Over.....	\$25 00
Nelson Ramsey.....	Sunbury, O.....	2d Best.....	10 00
C. G. Smith.....	Reynoldsburg, O.....	3d Best.....	5 00
Seymour Smith.....	Pataskala, O.....	Best Stallion 2 Years and Under 3.....	18 00
C. G. Smith.....	Reynoldsburg, O.....	Best Stallion 1 Year and Under 2.....	18 00
Seymour Smith.....	Pataskala, O.....	Best Stallion Colt Under 1 Year.....	12 00
Highland Forest Farm.....	Fulton, O.....	Best Mare 4 Years or Over.....	25 00
Highland Forest Farm.....	Fulton, O.....	2d Best.....	10 00
C. G. Smith.....	Reynoldsburg, O.....	3d Best.....	5 00
Highland Forest Farm.....	Fulton, O.....	Best Mare 3 Years and Under 4.....	18 00
Seymour Smith.....	Pataskala, O.....	2d Best.....	6 00
Highland Forest Farm.....	Fulton, O.....	Best Mare 2 Years and Under 3.....	18 00
E. P. Roloson & Son.....	Delaware, O.....	2d Best.....	6 00
Nelson Ramsey.....	Sunbury, O.....	Best Filly 1 Year and Under 2.....	12 00
Seymour Smith.....	Pataskala, O.....	2d Best.....	5 00
C. G. Smith.....	Reynoldsburg, O.....	Best Filly Colt Under 1 Year.....	10 00
Highland Forest Farm.....	Fulton, O.....	2d Best.....	4 00
Highland Forest Farm.....	Fulton, O.....	3d Best.....	2 00
Highland Forest Farm.....	Fulton, O.....	Best Get of Sire.....	25 00
C. G. Smith.....	Reynoldsburg, O.....	2d Best.....	10 00
C. G. Smith.....	Reynoldsburg, O.....	Best Produce of Mare.....	20 00
J. R. Heskitt.....	Fulton, O.....	2d Best.....	8 00

## ROADSTERS—NON-STANDARD.

Name of Owner.	Postoffice.	Awards.	Amount.
John L. Grove..	Newark, O.....	Best Stallion 4 Years or Over.....	\$25 00
Highland Forest Farm	Fulton, O.....	2d Best.....	10 00
B. F. Parsell.....	Reynoldsburg, O.....	3d Best.....	5 00
C. G. Smith.....	Reynoldsburg, O.....	Best Stallion 2 Years and Under 3.....	18 00
A. H. Andrews.....	Columbus, O.....	2d Best.....	6 00
A. W. Dennis.....	Columbus, O.....	3d Best.....	3 00
Nelson Ramsey.....	Sunbury, O.....	Best Stallion 1 Year and Under 2.....	18 00
Robert Patterson.....	Hilliard, O.....	2d Best.....	6 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Stallion Colt Under 1 Year.....	12 00
Dovel Park Stock Farm	Pickerington, O.....	2d Best.....	5 00
Dovel Park Stock Farm	Pickerington, O.....	3d Best.....	3 00
H. S. Grimes.....	Portsmouth, O.....	Best Mare 4 Years or Over.....	25 00
B. F. Parsell.....	Reynoldsburg, O.....	2d Best.....	10 00
C. A. Young.....	Lancaster.....	3d Best.....	5 00
Leonard Geyer.....	London, O.....	Best Mare 3 Years and Under 4.....	18 00
W. S. Robinson.....	Mt Sterling, O.....	2d Best.....	6 00
C. G. Smith.....	Reynoldsburg, O.....	Best Mare 2 Years and Under 3.....	18 00
C. G. Smith.....	Reynoldsburg, O.....	2d Best.....	6 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Filly 1 Year and Under 2.....	12 00
C. G. Smith.....	Reynoldsburg, O.....	2d Best.....	5 00
A. Joseph.....	Columbus, O. 1169 Oak street.....	3d Best.....	3 00
Highland Forest Farm	Fulton, O.....	Best Filly Colt Under 1 Year.....	10 00
I. M. K.....	Columbus, O., Sta. A	2d Best.....	4 00
B. F. Parsell.....	Reynoldsburg, O.....	3d Best.....	2 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Get of Sire.....	25 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Produce of Mare.....	20 00
W. S. Robinson.....	Mt. Sterling, O.....	2d Best.....	8 00
H. L. Domigan.....	Reynoldsburg, O.....	3d Best.....	4 00
Oientangy Stock Farm	Columbus, O., Sta. B	Sweepstakes .....	25 00

## AMERICAN CARRIAGE HORSES.

Name of Owner.	Postoffice.	Awards.	Amount.
Jacob B. Perkins....	Cleveland, O.....	Best Stallion 4 years or Over.....	\$20 00
C. G. Smith.....	Reynoldsburg, O.....	2d Best.....	10 00
Leonard & Geyer.....	London, O.....	3d Best.....	5 00
Seymour Smith.....	Pataskala, O.....	Best Stallion 2 Years and Under 3.....	15 00
Leonard & Geyer.....	London, O.....	Best Stallion 1 Year and Under 2.....	15 00
C. G. Smith.....	Reynoldsburg, O.....	2d Best.....	8 00
H. L. Domigan.....	Sunbury, O.....	3d Best.....	4 00
Leonard & Geyer.....	London, O.....	Best Stallion With Three of His Get of Either Sex.....	25 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Mare 4 Years old or Over.....	20 00
H. S. Grimes.....	Portsmouth, O.....	2d Best.....	10 00
Highland Forest Farm	Fulton, O.....	3d Best.....	5 00
Highland Forest Farm	Fulton, O.....	Best Mare 3 Years and Under 4.....	20 00
H. L. Domigan.....	Sunbury, O.....	2d Best.....	10 00
Highland Forest Farm	Fulton, O.....	3d Best.....	5 00
Leonard & Geyer.....	London, O.....	Best Mare 2 Years and Under 3.....	15 00
Highland Forest Farm	Fulton, O.....	2d Best.....	8 00
C. G. Smith.....	Reynoldsburg, O.....	3d Best.....	4 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Filly 1 Year and Under 2.....	15 00
C. G. Smith.....	Reynoldsburg, O.....	2d Best.....	8 00
W. S. Robinson.....	Mt. Sterling, O.....	3d Best.....	4 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Mare With Foal of Either Sex.....	25 00
B. F. Parsell.....	Reynoldsburg, O.....	Best Foal Under 1 Year, Either Sex.....	10 00
Highland Forest Farm	Fulton, O.....	2d Best.....	4 00
W. S. Robinson.....	Mt. Sterling, O.....	3d Best.....	2 00
Highland Forest Farm	Fulton, O.....	Best Gelding Any Age.....	20 00
Nelson Ramsey.....	Sunbury, O.....	2d Best.....	10 00
Seymour Smith.....	Pataskala, O.....	3d Best.....	5 00



## FRENCH COACH.

Name of Owner.	Postoffice.	Awards.	Amount.
McLaughlin Bros....	Columbus, O.....	Best Stallion 4 Years or Over.....	\$25 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	10 00
McLaughlin Bros....	Columbus, O.....	3d Best.....	4 00
McLaughlin Bros....	Columbus, O.....	Best Stallion 3 Years and Under 4.....	25 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	10 00
McLaughlin Bros....	Columbus, O.....	3d Best.....	4 00
H. L. Domigan.....	Sunbury, O.....	Best Stallion 1 Year and Under 2.....	18 00
Leonard & Geyer....	London, O.....	Best Mare 4 Years or Over.....	25 00
McLaughlin Bros....	Columbus, O.....	Best Get of Sire.....	25 00
McLaughlin Bros....	Columbus, O.....	Best Produce of Mare.....	20 00
McLaughlin Bros....	Columbus, O.....	Champion Stallion Any Age.....	Ribbon.
Leonard & Geyer....	London, O.....	Champion Mare Any Age.....	Ribbon.

## GERMAN COACH.

Name of Owner.	Postoffice.	Awards.	Amount.
G. W. Crawford.....	Newark, O.....	Best Stallion 4 Years or Over.....	\$25 00
G. W. Crawford.....	Newark, O.....	2d Best.....	10 00
G. W. Crawford.....	Newark, O.....	3d Best.....	4 00
G. W. Sowers & Sons	Huntington, Ind.....	Best Stallion 3 Years and Under 4.....	25 00
H. L. Domigan.....	Sunbury, O.....	Best Stallion 1 Year and Under 2.....	18 00
Leonard & Geyer....	London, O.....	2d Best.....	5 00
Leonard & Geyer....	London, O.....	Best Stallion Colt Under 1 Year.....	12 00
H. L. Domigan.....	Sunbury, O.....	Best Mare 3 Years and Under 4.....	18 00
Leonard & Geyer....	London, O.....	Best Mare 2 Years and Under 3.....	18 00
E. P. Roloson & Son.	Delaware, O.....	2d Best.....	5 00
E. P. Roloson & Son.	Delaware, O.....	Best Filly 1 Year and Under 2.....	12 00
G. W. Crawford....	Newark O.....	Champion Stallion Any Age.....	Ribbon.

## BELGIAN.

Name of Owner.	Postoffice.	Awards.	Amount.
G. W. Crawford.....	Newark, O.....	Best Stallion 4 Years or Over.....	\$20 00
G. W. Crawford.....	Newark, O.....	2d Best.....	15 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	10 00
G. W. Sowers & Sons	Huntington, Ind.....	Best Stallion 3 Years and Under 4.....	20 00
G. W. Sowers & Sons	Huntington, Ind.....	2d Best.....	15 00
G. W. Crawford.....	Newark, O.....	3d Best.....	10 00
G. W. Crawford.....	Newark, O.....	Best Stallion 2 Years and Under 3.....	15 00
G. W. Sowers & Sons	Huntington, Ind.....	2d Best.....	12 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	9 00
Ben. F. McCann.....	Dayton, O.....	Best Stallion 1 Year and Under 2.....	15 00
G. W. Sowers & Sons	Huntington, Ind.....	Best Mare 4 Years or Over.....	20 00
G. W. Sowers & Sons	Huntington, Ind.....	2d Best.....	15 00
G. W. Crawford.....	Newark, O.....	3d Best.....	10 00
G. W. Sowers & Sons	Huntington, Ind.....	Best Mare 3 Years and Under 4.....	15 00
G. W. Crawford.....	Newark, O.....	2d Best.....	12 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	9 00
G. W. Sowers & Sons	Huntington, Ind.....	Best Mare 2 Years and Under 3.....	15 00
G. W. Crawford.....	Newark.....	2d Best.....	12 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	9 00
G. W. Crawford.....	Newark, O.....	Best Filly 1 Year and Under 2.....	10 00
G. W. Sowers & Sons	Huntington, Ind.....	2d Best.....	8 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	5 00
G. W. Crawford.....	Newark, O.....	Best Get of Sire.....	25 00

## PERCHERONS.

Name of Owner.	Postoffice.	Awards.	Amount.
McLaughlin Bros....	Columbus, O.....	Best Stallion 4 Years or Over.....	\$20 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	15 00
McLaughlin Bros....	Columbus, O.....	3d Best.....	10 00
Benj. F. McCann.....	Dayton, O.....	4th Best.....	5 00
McLaughlin Bros....	Columbus, O.....	Best Stallion 3 Years and Under 4.....	20 00

## PERCHERONS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
McLaughlin Bros....	Columbus, O.....	2d Best.....	\$15 00
G. W. Sowers & Son	Huntington, Ind.....	3d Best.....	10 00
Leonard & Geyer....	London, O.....	4th Best.....	5 00
Lonzo McLain.....	Lima, O.....	Best Stallion 2 Years and Under 3.....	15 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	12 00
McLaughlin Bros....	Columbus, O.....	3d Best.....	9 00
McLaughlin Bros....	Columbus, O.....	4th Best.....	4 00
G. W. Crawford.....	Newark, O.....	Best Stallion 1 Year and Under 2.....	15 00
Lonzo McLain.....	Lima, O.....	2d Best.....	12 00
Ferguson Bros.....	Delaware, O.....	Best Stallion Colt Under 1 Year.....	10 00
G. W. Crawford.....	Newark, O.....	Best Mare 4 Years or Over.....	20 00
G. W. Sowers & Sons	Huntington, Ind.....	2d Best.....	15 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	10 00
C. M. Jones.....	Plain City, O.....	4th Best.....	5 00
McLaughlin Bros....	Columbus, O.....	Best Mare 3 Years and Under 4.....	15 00
C. M. Jones.....	Plain City, O.....	2d Best.....	12 00
G. W. Crawford.....	Newark, O.....	3d Best.....	9 00
Marion Bidwell.....	West Jefferson, O.....	4th Best.....	4 00
McLaughlin Bros....	Columbus, O.....	Best Mare 2 Years and Under 3.....	15 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	12 00
G. W. Sowers & Sons	Huntington, Ind.....	3d Best.....	9 00
McLaughlin Bros....	Columbus, O.....	4th Best.....	4 00
McLaughlin Bros....	Columbus, O.....	Best Filly 1 Year and Under 2.....	10 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	8 00
McLaughlin Bros....	Columbus, O.....	3d Best.....	5 00
McLaughlin Bros....	Columbus, O.....	Best Get of Sire.....	25 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	15 00
G. W. Crawford.....	Newark, O.....	3d Best.....	10 00
McLaughlin Bros....	Columbus, O.....	Best Produce of Mare.....	20 00
McLaughlin Bros....	Columbus, O.....	2d Best.....	15 00
McLaughlin Bros....	Columbus, O.....	Champion Stallion.....	Ribbon.
G. W. Crawford.....	Newark, O.....	Champion Mare.....	Ribbon.

## CLYDSDALE AND SHIRES

Name of Owner.	Postoffice.	Awards.	Amount.
Marion Bidwell.....	West Jefferson, O....	Best Stallion 4 Years or Over.....	\$25 00
Marion Bidwell.....	West Jefferson, O....	Best Stallion 3 Years and Under 4.....	25 00
Leonard & Geyer....	London, O.....	Best Mare 4 Years or Over.....	25 00
Leonard & Geyer....	London, O.....	2d Best.....	10 00

## AMERICAN BRED DRAFT.

Name of Owner.	Postoffice.	Awards.	Amount.
Lonzo McLain.....	Lima, O.....	Best Stallion 4 Years or Over.....	\$25 00
Lonzo McLain.....	Lima, O.....	Best Stallion 3 Years and Under 4.....	25 00
C. M. Jones.....	Plain City, O.....	Best Stallion 2 Years and Under 3.....	18 00
Lonzo McLain.....	Lima, O.....	2d Best.....	6 00
Lonzo McLain.....	Lima, O.....	3d Best.....	3 00
Leonard & Geyer....	London, O.....	Best Stallion 1 Year and Under 2.....	18 00
C. A. Ferguson.....	Delaware, O.....	2d Best.....	6 00
Lonzo McLain.....	Lima, O.....	3d Best.....	3 00
Lonzo McLain.....	Lima, O.....	Best Stallion Colt Under 1 Year.....	12 00
Lonzo McLain.....	Lima, O.....	2d Best.....	5 00
Lonzo McLain.....	Lima, O.....	3d Best.....	3 00
C. M. Jones.....	Plain City, O.....	Best Mare 4 Years or Over.....	25 00
Marion Bidwell.....	West Jefferson, O....	2d Best.....	10 00
C. M. Jones.....	Plain City, O.....	3d Best.....	5 00
C. M. Jones.....	Plain City, O.....	Best Mare 3 Years and Under 4.....	18 00
Lonzo McLain.....	Lima, O.....	2d Best.....	6 00
Lonzo McLain.....	Lima, O.....	3d Best.....	3 00
Lonzo McLain.....	Lima, O.....	Best Mare 2 Years and Under 3.....	18 00
Ferguson Bros.....	Delaware, O.....	Best Filly 1 Year and Under 2.....	12 00
H. L. Domigan.....	Sunbury, O.....	2d Best.....	5 00
C. A. Ferguson.....	Delaware, O.....	Best Filly Colt Under 1 Year.....	10 00
C. M. Jones.....	Plain City, O.....	2d Best.....	4 00
Lonzo McLain.....	Lima, O.....	Best Get of Sire.....	25 00
C. M. Jones.....	Plain City, O.....	2d Best.....	10 00
Ferguson Bros.....	Delaware, O.....	3d Best.....	5 00
Lonzo McLain.....	Lima, O.....	Best Produce of Mare.....	20 00
Lonzo McLain.....	Lima, O.....	2d Best.....	8 00
C. M. Jones.....	Plain City, O.....	3d Best.....	4 00

## GRADE DRAFT.

Name of Owner.	Postoffice.	Awards.	Amount.
H. L. Domigan.....	Sunbury, O.....	Best Gelding or Mare 4 Years or Over.....	\$12 00
P. W. Stephens.....	Ashley, O.....	2d Best.....	6 00
Marion Bidwell.....	West Jefferson, O.....	Best Gelding or Mare 3 Years and Under 4.....	12 00
H. L. Domigan.....	Sunbury, O.....	2d Best.....	6 00
J. M. Elliott.....	Columbus, O., Sta. A.....	3d Best.....	2 00
E. P. Roloson & Son.....	Delaware, O.....	Best Gelding or Mare 2 Years and Under 3.....	12 00
J. M. Elliott.....	Columbus, O., Sta. A.....	2d Best.....	6 00
Leonard & Geyer.....	London, O.....	Best Gelding or Mare 1 Year and Under 2.....	12 00
E. P. Roloson & Son.....	Delaware, O.....	2d Best.....	6 00
H. L. Domigan.....	Sunbury, O.....	3d Best.....	2 00
H. L. Domigan.....	Sunbury, O.....	Best Gelding or Mare Any Age.....	12 00
Leonard & Geyer.....	London, O.....	2d Best.....	6 00
E. P. Roloson & Son.....	Delaware, O.....	3d Best.....	2 00
H. L. Domigan.....	Sunbury, O.....	Best Matched Team to Appropriate Vehicle.....	20 00

## HACKNEYS.

Name of Owner.	Postoffice.	Awards.	Amount.
C. E. Bunn.....	Peoria, Ill.....	Best Stallion 4 Years or Over.....	\$25 00
C. E. Bunn.....	Peoria, Ill.....	Best Stallion 3 Years and Under 4.....	25 00
C. E. Bunn.....	Peoria, Ill.....	Best Mare 4 Years or Over.....	25 00
C. E. Bunn.....	Peoria, Ill.....	2d Best.....	10 00
Leonard & Geyer.....	London, O.....	3d Best.....	5 00
C. E. Bunn.....	Peoria, Ill.....	Best Mare 2 Years and Under 3.....	18 00

## SADDLE HORSES.

Name of Owner.	Postoffice.	Awards.	Amount.
Jacob B. Perkins.....	Cleveland, O.....	Best Stallion 4 Years or Over.....	\$20 00
W. S. Robinson.....	Mt. Sterling, O.....	2d Best.....	10 00
H. E. Donovan, Agt.....	Columbus, O., 979 Summit street.....	Best Mare 4 Years or Over.....	20 00
W. S. Robinson.....	Mt. Sterling, O.....	2d Best.....	10 00
J. W. Jones.....	Columbus, O., State School for Deaf.....	3d Best.....	5 00
W. S. Robinson.....	Mt. Sterling, O.....	Best Mare Under 4 Years.....	15 00
J. B. Vance.....	Lockbourne, O.....	Best Gelding 4 Years or Over.....	20 00
H. E. Donovan.....	Columbus, O.....	2d Best.....	10 00
J. B. Vance.....	Lockbourne, O.....	Best Gelding Under 4 Years.....	15 00

## COMBINED HARNESS AND SADDLE HORSES.

Name of Owner.	Postoffice.	Awards.	Amount.
Jacob Perkins.....	Cleveland, O.....	Best Stallion Any Age.....	\$20 00
W. S. Robinson.....	Mt. Sterling, O.....	2d Best.....	10 00
W. S. Robinson.....	Mt. Sterling, O.....	Best Mare Any Age.....	20 00
J. W. Jones.....	Columbus, O.....	2d Best.....	10 00
W. S. Robinson.....	Mt. Sterling, O.....	3d Best.....	5 00
J. B. Vance.....	Lockbourne, O.....	Best Gelding Any Age.....	20 00
J. B. Vance.....	Lockbourne, O.....	2d Best.....	10 00
H. E. Donovan.....	Columbus, O.....	3d Best.....	5 00

## HIGH SCHOOL HORSES.

Name of Owner.	Postoffice.	Awards.	Amount.
H. E. Donovan.....	Columbus, O.....	Best Horse, Mare or Gelding Any Age.....	\$25 00

## EQUESTRIANISM.

Name of Owner.	Postoffice.	Awards.	Amount.
J. E. Vance.....	Lockbourne, O.....	Best Lady Rider With Escort.....	\$15 00
W. S. Robinson.....	Mt. Sterling, O.....	2d Best.....	10 00

## HARNESS CLASS.

Name of Owner.	Postoffice.	Awards.	Amount.
Olentangy Stock Farm .....	Columbus, O., Sta. B	Best Pair Matched Roadsters to Road Wagon or Buggy .....	\$20 00
W. S. Robinson.....	Mt. Sterling, O.....	2d Best.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	5 00
Olentangy Stock Farm .....	Columbus, O., Sta. B	Best Single Driver to Road Wagon or Buggy....	10 00
Highland Forest Farm .....	Fulton O.....	2d Best.....	5 00
C. A. Young.....	Lancaster, O.....	3d Best.....	3 00
Highland Forest Farm .....	Fulton, O.....	Best Coach Team to Coach or Heavy Carriage.	20 00
Dr. C. E. Leist.....	Columbus, O., 54 E. Gay street.....	Best Single Coach Mare or Gelding to Appropriate Vehicle .....	10 00
Highland Forest Farm .....	Fulton, O.....	2d Best.....	5 00
Highland Forest Farm .....	Fulton, O.....	3d Best.....	3 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Tandem Team to Two-Wheeled Cart.....	10 00

## COACHING PARADE.

Name of Owner.	Postoffice.	Awards.	
Olentangy Stock Farm .....	Columbus, O., Sta. B	Most Attractive Turnout.....	Silver Plate.
W. S. Robinson.....	Mt. Sterling, O.....	2d Most Attractive Turnout.....	Silver Cup.
Highland Forest Farm .....	Fulton, O.....	3d Most Attractive Turnout.....	Silver Medal.

## UTILITY CLASS.

Name of Owner.	Postoffice.	Awards.	
P. W. Stephens.....	Ashley, O.....	Best Double Team and Delivery or Transfer Wagon .....	Silver Cup.

## SHETLAND PONIES.

Name of Owner.	Postoffice.	Awards.	Amount.
Geo. A. Heyl.....	Washington, Ill.....	Best Stallion 4 Years or Over.....	\$15 00
Chas. E. Bunn.....	Peoria, Ill.....	2d Best.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	5 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Stallion 3 Years or Over.....	15 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	10 00
Geo. A. Heyl.....	Washington, Ill.....	3d Best.....	5 00
Geo. A. Heyl.....	Washington, Ill.....	Best Stallion 2 Years and Under 3.....	12 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	6 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	4 00
Logan W. Black.....	Jacksonville, Ill.....	Best Stallion 1 Year and Under 2.....	12 00
Chas. E. Bunn.....	Peoria, Ill.....	2d Best.....	6 00
Geo. A. Heyl.....	Washington, Ill.....	3d Best.....	4 00
Geo. A. Heyl.....	Washington, Ill.....	Best Stallion Colt Under 1 Year.....	10 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	5 00
Kohler & Justice.....	Plain City, O.....	3d Best.....	3 00
Geo. A. Heyl.....	Washington, Ill.....	Best Mare 4 Years or Over.....	15 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	5 00
Geo. A. Heyl.....	Washington, Ill.....	Best Mare 3 Years or Over.....	15 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	5 00

## SHETLAND PONIES—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
Geo. A. Heyl.....	Washington, Ill.....	Best Mare 2 Years and Under 3.....	\$12 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	6 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	4 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Filly 1 Year and Under 2.....	12 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	6 00
Logan W. Black.....	Jacksonville, Ill.....	3d Best.....	4 00
Geo. A. Heyl.....	Washington, Ill.....	Best Filly Colt Under 1 Year.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	2d Best.....	5 00
Smith Bros.....	Mt. Vernon, O.....	3d Best.....	3 00
Geo. A. Heyl.....	Washington, Ill.....	Best Herd of Ten Head.....	15 00
Chas. E. Bunn.....	Peoria, Ill.....	2d Best.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Sire and Get.....	15 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	5 00
Logan W. Black.....	Jacksonville, Ill.....	3d Best.....	3 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Mare and Produce.....	15 00
Logan W. Black.....	Jacksonville, Ill.....	2d Best.....	5 00
Logan W. Black.....	Jacksonville, Ill.....	3d Best.....	3 00

## IN HARNESS TO APPROPRIATE VEHICLES.

Name of Owner.	Postoffice.	Awards.	Amount.
Logan W. Black.....	Jacksonville, Ill.....	Best Single Turnout.....	\$15 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	8 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	4 00
Logan W. Black.....	Jacksonville, Ill.....	Best Double Team Turnout.....	15 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	8 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	4 00
Logan W. Black.....	Jacksonville, Ill.....	Best Four in Hand.....	15 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	8 00
Chas. E. Bunn.....	Peoria, Ill.....	3d Best.....	4 00
Logan W. Black.....	Jacksonville, Ill.....	Best Pony Under Saddle.....	10 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	5 00
Geo. A. Heyl.....	Washington, Ill.....	3d Best.....	2 00

## PONIES—OTHER THAN SHETLAND—AT HALTER.

Name of Owner.	Postoffice.	Awards.	Amount.
C. C. Hunter.....	Mt. Vernon, O.....	Best Stallion 3 Years or Over.....	\$20 00
Kohler & Justice.....	Plain City, O.....	2d Best.....	10 00
Benj. Jamison.....	Washington C. H., O.....	Best Stallion 2 Years and Under 3.....	12 00
Chas. E. Bunn.....	Peoria, Ill.....	2d Best.....	6 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Mare 3 Years or Over.....	20 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	10 00
Chas. E. Bunn.....	Peoria, Ill.....	Best Mare 2 Years and Under 3.....	12 00
Benj. Jamison.....	Washington C. H., O.....	2d Best.....	6 00

## IN HARNESS TO APPROPRIATE VEHICLES.

Name of Owner.	Postoffice.	Awards.	Amount.
Charles E. Bunn.....	Peoria, Ill.....	Best Single Turnout.....	\$15 00
Geo. A. Heyl.....	Washington, Ill.....	2d Best.....	8 00
Charles E. Bunn.....	Peoria, Ill.....	Best Double Team Turnout.....	15 00
Cobb Gavitt.....	Ashley, O.....	2d Best.....	8 00
Smith Bros.....	Mt. Vernon, O.....	Best Four in Hand.....	15 00
Charles E. Bunn.....	Peoria, Ill.....	Best Pony Under Saddle.....	10 00
Smith Bros.....	Mt. Vernon, O.....	2d Best.....	5 00

## OHIO SHETLAND PONIES.

Name of Owner.	Postoffice.	Awards.	Amount.
Smith Bros.....	Mt. Vernon, O.....	Best Stallion 3 Years or Over.....	\$15 00
Cobb Gavitt & Co.....	Ashley, O.....	2d Best.....	8 00
Cobb Gavitt & Co.....	Ashley, O.....	3d Best.....	3 00
C. C. Hunter.....	Mt. Vernon, O.....	Best Mare 3 Years or Over.....	15 00
Kohler & Justice.....	Plain City, O.....	2d Best.....	8 00
Benj. Jamison.....	Washington C. H., O.....	3d Best.....	3 00

## WINNERS IN SPEED EVENTS

MONDAY, AUGUST 30.

## 2:17 CLASS TROTTING—PURSE \$600.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
John Jackman.....	Toledo, O.....	Kito .....	2 1 1 1	\$300 00
Kyger Bros.....	Oxford, O.....	Frank .....	5 6 2 2	150 00
S. W. Hardway.....	Newark, O.....	Queen H.....	3 2 4 3	90 00
Thomas Burns.....	Watertown, N. Y.....	Lazarus .....	10 8 3 4	60 00

Time—2:14¾, 2:16¾, 2:15¾, 2:16.

## FREE-FOR-ALL CLASS PACING—\$1,000.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
W. H. Mallow.....	Washington C. H., O.	Major Mallow.....	1 1 1	\$500 00
E. Q. Osborn.....	Laferty, Ind.....	Gypsy Woodland....	2 2 2	250 00
John Jackman.....	Toledo, O.....	Sir Milton.....	3 3 3	150 00
A. E. Hundley & Sons	Danville, Ky.....	Pickles .....	4 4 4	100 00

Time, 2:10¾, 2:10¾, 2:12¾.

## 2:35 CLASS TROTTING—PURSE \$500.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
Horine & Drake.....	Lexington, Ky.....	The Plunger.....	1 1 1	\$250 00
W. H. Caskey.....	Columbus, O.....	Miss Caskey.....	4 3 2	125 00
T. H. Raftery.....	Hamilton, O.....	Panzy Silver.....	5 2 6	75 00
Hugh Lewis.....	Dayton, O.....	Delicatessen .....	3 4 3	50 00

Time—2:21¾, 2:19¾, 2:22¾.

TUESDAY, AUGUST 31.

## 2:13 CLASS PACING—PURSE \$800.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
W. S. Taylor.....	Dayton, .....	Harry Mc.....	1 2 2 1 1	\$400 00
W. J. O'Brien.....	Marysville, O.....	Zulu Hal.....	2 1 1 2 3	200 00
W. S. Rowe.....	St. Joseph, Ill.....	Prince R.....	6 3 3 3 2	120 00
O. D. Freeman.....	Fremont, O.....	Glenwood B.....	3 4 4 4 5	80 00

Time—2:11¾, 2:10¾, 2:10¾, 2:10¾, 2:12.

## 2:23 CLASS TROTTING—PURSE \$500.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
John Jackman.....	Toledo, O.....	Maud's Pilot.....	1 4 1 3 2	\$250 00
William Weber.....	Mt. Orab, O.....	Miriam W.....	6 2 5 1 1	125 00
Dr. H. H. Smith.....	Oxford, O.....	Lord Constantine...	4 1 7 2 3	75 00
Dave G. McDonald..	Pittsburg, Pa.....	Doctor Joe.....	2 5 2 4 5	50 00

Time—2:20¾, 2:19¾, 2:23, 2:20, 2:19¾.

## 2:30 CLASS PACING—PURSE \$500.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
John Johnson.....	New Holland, O.....	Bonnie J.....	1 1 1	\$250 00
Leo. H. Wammes....	Piqua, O.....	Col. Wammes.....	2 2 3	125 00
J. A. Thornton.....	New Vienna, O.....	Sir Austin T.....	4 3 2	75 00
R. B. Long.....	Georgetown, Ky.....	Roy Wilkes, Jr....	3 5 3	50 00

Time—2:14½, 2:14½, 2:15.

## WEDNESDAY, SEPT. 1.

## 2:10 CLASS TROTTING—PURSE \$1,000.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
R. P. Letter.....	Pt. Pleasant, W. Va.	Happy F.....	1 1 1	\$500 00
Rody Patterson.....	Columbus, O.....	Idlewise .....	2 2 2	250 00
J. B. Whitney.....	Painesville, O.....	Reuben S.....	3 3 3	150 00

Time—2:15½, 2:15½, 2:14½.

## 2:19 CLASS PACING PURSE \$600.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
J. M. Hull.....	Washington C. H., O.	Tommy Temple.....	5 1 1 1	\$300 00
S. S. Ruble.....	Logan, O.....	Peter Chimes.....	1 3 2 3	150 00
D. Q. Osborn.....	Liberty, Ind.....	Nathalie .....	3 2 4 5	90 00
F. F. F Adler.....	Berea, O.....	Miss Josephine.....	6 7 3 2	60 00

Time—2:15½, 2:17½, 2:14½, 2:14.

## 2:28 CLASS TROTTING—PURSE \$500.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
John Jackman.....	Toledo, O.....	Maud's Pilot.....	1 1 1 1	\$250 00
Horine & Drake.....	Lexington, Ky.....	Jordon .....	2 2 3	125 00
S. S. Ruble.....	Logan, O.....	Harry Almont.....	8 5 2	75 00
William Willoughby.	Springfield, O.....	Mabel .....	3 3 4	50 00

Time—2:22½, 2:22½, 2:22½.

## THURSDAY, SEPT. 2.

## 2:10 CLASS PACING—PURSE \$1,000.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
William N. Albin....	Springfield, O.....	Maconda .....	2 1 1 1	\$500 00
H. H. Stokes, Agt....	Urbana, O.....	Roan Tom.....	1 5 5 2	250 00
Henry J. Meyer.....	Pittsburg, Pa.....	Emma Welte.....	4 3 3 3	150 00
J. P. Darnell.....	Wilmington, O.....	Minnie Burns.....	5 4 4 4	100 00

Time—2:11½, 2:10½, 2:13, 2:11.

## 2:20 CLASS TROTTING—PURSE \$600.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
John H. Swisher.....	Newark, O.....	Vanko .....	3 1 1 2 6	\$300 00
Dr. H. H. Smith.....	Oxford, O.....	Lord Constantine....	5 5 4 1 1	150 07
J. W. Curry.....	South Solon, O.....	Mokover .....	1 3 5 5 4	90 00
John Jackman.....	Toledo, O.....	Kito .....	8 2 7 3 2	60 00

Time—2:19¼, 2:19¼, 2:20, 2:17¼, 2:20.

## 2:16 CLASS PACING PURSE \$600.

Entered By	Residence.	Name of Horse.	Heats.	Amount. Won.
Geo. M. Wilber.....	Marysville, O.....	Mackey Boy.....	9 1 1 1	\$300 00
E. Q. Osborn.....	Liberty, Ind.....	Pauline Hilda.....	1 2 7 2	150 00
W. S. Taylor.....	Dayton, O.....	Bear Catcher.....	3 5 2 7	90 00
Horine & Drake, Agts .....	Lexington, Ky.....	The Orator.....	2 3 14 12	60 00

Time—2:13¼, 2:13¼, 2:15, 2:15¼.



## SECOND DEPARTMENT—CATTLE

J. A. BEIDLER, Member in Charge.

E. C. FOOTE..... Superintendent  
M. L. VAN METER..... Clerk

## JUDGES.

ABRAM RENICK, J. H. MILLER, JOHN GARDEN, E. L. VAN DUSEN, W. J. GILLET,  
J. A. McINTOSH, W. F. WILSON, J. DICKSON.

Received from stall rent 1909..... \$1,329 00  
Premiums offered 1909..... 6,748 00  
Premiums paid 1909..... 6,288 00  
Paid superintendent, judges, etc., 1909..... 400 65  
  
Received from stall rent 1908..... \$774 00  
Premiums offered 1908..... 6,112 00  
Premiums paid 1908..... 4,968 00  
Paid superintendent, judges, etc., 1908..... 344 45

## SHORTHORNS.

Name of Owner.	Postoffice.	Awards.	Amount.
Carpenter & Ross.....	Mansfield, O.....	Best Bull 3 Years or Over.....	\$20 00
J. G. Robbins & Son.....	Horace, Ind.....	2d Best.....	15 00
Thomas Johnson.....	Columbus, O.....	3d Best.....	10 00
Thomas Johnson.....	Columbus, O.....	4th Best.....	5 00
C. E. Johnson.....	Flushing, O.....	Best Bull 2 Years and Under 3.....	20 00
J. A. Gerlaugh.....	Harshman, O.....	2d Best.....	15 00
Carpenter & Ross.....	Mansfield, O.....	3d Best.....	10 00
Carpenter & Ross.....	Mansfield, O.....	4th Best.....	5 00
N. W. Wagner.....	Fremont, O.....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908.....	20 00
Carpenter & Ross.....	Mansfield, O.....	2d Best.....	15 00
Thomas Johnson.....	Columbus, O.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	20 00
D. R. Hanna.....	Ravenna, O.....	2d Best.....	15 00
J. H. Miller.....	Peru, Ind.....	3d Best.....	10 00
Carpenter & Ross.....	Mansfield, O.....	4th Best.....	5 00
Thomas Johnson.....	Columbus, O.....	Best Senior Bull Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	20 00
Thomas Johnson.....	Columbus, O.....	2d Best.....	15 00
Carpenter & Ross.....	Mansfield, O.....	3d Best.....	10 00
Thomas Johnson.....	Columbus, O.....	4th Best.....	5 00
J. A. Gerlaugh.....	Harshman, O.....	5th Best.....	5 00
Carpenter & Ross.....	Mansfield, O.....	Best Junior Bull Calf Dropped Since January 1, 1909.....	20 00
Thomas Johnson.....	Columbus, O.....	2d Best.....	15 00
N. W. Wagner.....	Fremont, O.....	3d Best.....	10 00
Carpenter & Ross.....	Mansfield, O.....	4th Best.....	5 00
Thos. H. Nelson.....	Hillshoro, O.....	5th Best.....	5 00
D. R. Hanna.....	Ravenna, O.....	Best Cow, 3 Years or Over.....	20 00
Thomas Johnson.....	Columbus, O.....	2d Best.....	15 00
Carpenter & Ross.....	Mansfield, O.....	3d Best.....	10 00
J. G. Robbins & Sons.....	Horace, Ind.....	4th Best.....	5 00
Thomas Johnson.....	Columbus, O.....	Best Cow or Heifer 2 Years and Under 3.....	20 00
D. R. Hanna.....	Ravenna, O.....	2d Best.....	15 00
Thomas Johnson.....	Columbus, O.....	3d Best.....	10 00
J. G. Robbins & Sons.....	Horace, Ind.....	4th Best.....	5 00
Thomas Johnson.....	Columbus, O.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	20 00
Carpenter & Ross.....	Mansfield, O.....	2d Best.....	15 00
Carpenter & Ross.....	Mansfield, O.....	3d Best.....	10 00
J. G. Robbins & Sons.....	Horace, Ind.....	4th Best.....	5 00
D. R. Hanna.....	Ravenna, O.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	20 00
Carpenter & Ross.....	Mansfield, O.....	2d Best.....	15 00
Carpenter & Ross.....	Mansfield, O.....	3d Best.....	10 00
J. G. Robbins & Son.....	Horace, Ind.....	4th Best.....	5 00
Thomas Johnson.....	Columbus, O.....	Best Senior Heifer Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	20 00
J. A. Gerlaugh.....	Harshman, O.....	2d Best.....	15 00
Thomas Johnson.....	Columbus, O.....	3d Best.....	10 00
Thomas Johnson.....	Columbus, O.....	4th Best.....	5 00
Carpenter & Ross.....	Mansfield, O.....	5th Best.....	5 00

## SHORTHORNS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
Thomas Johnson....	Columbus, O.....	Best Junior Heifer Calf Dropped Since January 1, 1909.....	\$20 00
Thomas Johnson....	Columbus, O.....	2d Best.....	15 00
J. G. Robbins & Sons	Horace, Ind.....	3d Best.....	10 00
D. R. Hanna.....	Ravenna, O.....	4th Best.....	5 00
Carpenter & Ross	Mansfield, O.....	5th Best.....	5 00
Thomas Johnson....	Columbus, O.....	Best Exhibitors' Herd.....	50 00
D. R. Hanna.....	Ravenna, O.....	2d Best.....	30 00
Carpenter & Ross	Mansfield, O.....	3d Best.....	20 00
Carpenter & Ross	Mansfield, O.....	Best Breeders' Young Herd.....	40 00
Carpenter & Ross	Mansfield, O.....	2d Best.....	25 00
D. R. Hanna.....	Ravenna, O.....	3d Best.....	15 00
Thomas Johnson....	Columbus, O.....	Best Calf Herd.....	80 00
Thomas Johnson....	Columbus, O.....	2d Best.....	20 00
Carpenter & Ross	Mansfield, O.....	3d Best.....	10 00
Thomas Johnson....	Columbus, O.....	Best Get of Sire.....	30 00
Carpenter & Ross	Mansfield, O.....	2d Best.....	20 00
Thomas Johnson....	Columbus, O.....	3d Best.....	10 00
Carpenter & Ross	Mansfield, O.....	Best Produce of Cow.....	20 00
Carpenter & Ross	Mansfield, O.....	2d Best.....	12 00
West & West	Hillsboro, O.....	3d Best.....	8 00
Carpenter & Ross	Mansfield, O.....	Senior Champion Bull.....	20 00
Thomas Johnson....	Columbus, O.....	Junior Champion Bull.....	20 00
D. R. Hanna.....	Ravenna, O.....	Senior Champion Cow.....	20 00
D. R. Hanna.....	Ravenna, O.....	Junior Champion Female.....	20 00
Thomas Johnson....	Columbus, O.....	Grand Champion Bull.....	20 00
D. R. Hanna.....	Ravenna, O.....	Grand Champion Female.....	20 00

## ABERDEEN-ANGUS.

Name of Owner.	Postoffice.	Awards.	Amount.
B. B. Johnson & Sons	Atlanta, Ind.....	Best Bull 3 Years or Over.....	\$16 00
D. Bradfute & Son..	Cedarville, O.....	2d Best.....	12 00
Ferguson & Hutchinson	Xenia, O.....	3d Best.....	5 00
D. Bradfute & Son..	Cedarville, O.....	Best Bull 2 Years and Under 3.....	16 00
Lew Kerr.....	Newtown, Ind.....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908....	12 00
B. B. Johnson & Sons	Atlanta, Ind.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908....	12 00
Ferguson & Hutchinson	Xenia, O.....	2d Best.....	6 00
Lew Kerr.....	Newtown, Ind.....	3d Best.....	4 00
D. Bradfute & Son..	Cedarville, O.....	Best Senior Bull Calf Dropped Between September 1, 1908, and January 1, 1909....	10 00
B. B. Johnson & Sons	Atlanta, Ind.....	2d Best.....	6 00
D. Bradfute & Son..	Cedarville, O.....	Best Junior Bull Calf Dropped Since January 1, 1909.....	10 00
Ferguson & Hutchinson	Xenia, O.....	2d Best.....	6 00
B. B. Johnson & Sons	Atlanta, Ind.....	Best Cow 3 Years or Over.....	16 00
D. Bradfute & Son..	Cedarville, O.....	2d Best.....	12 00
D. Bradfute & Son..	Cedarville, O.....	3d Best.....	6 00
Lew Kerr.....	Newtown, Ind.....	4th Best.....	3 00
Ferguson & Hutchinson	Xenia, O.....	Best Cow or Heifer 2 Years and Under 3.....	16 00
Ferguson & Hutchinson	Xenia, O.....	2d Best.....	12 00
D. Bradfute & Son..	Cedarville, O.....	3d Best.....	5 00
Lew Kerr.....	Newtown, Ind.....	4th Best.....	3 00
Ferguson & Hutchinson	Xenia, O.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908....	10 00
D. Bradfute & Son..	Cedarville, O.....	2d Best.....	6 00
Ferguson & Hutchinson	Xenia, O.....	3d Best.....	4 00
B. B. Johnson & Sons	Atlanta, Ind.....	4th Best.....	2 00
D. Bradfute & Son..	Cedarville, O.....	Best Junior Yearling Heifer Dropped Between January 1, 1908 and September 1, 1908....	10 00
D. Bradfute & Sons	Cedarville, O.....	2d Best.....	6 00
B. B. Johnson & Sons	Atlanta, Ind.....	3d Best.....	4 00
Lew Kerr.....	Newtown, Ind.....	4th Best.....	2 00
Lew Kerr.....	Newtown, Ind.....	Best Senior Heifer Calf Dropped Between September 1, 1908, and January 1, 1909....	10 00
D. Bradfute & Son..	Cedarville, O.....	2d Best.....	6 00

## ABERDEEN-ANGUS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
Ferguson & Hutch- inson .....	Xenia, O. ....	3d Best.....	\$4 00
Lew Kerr.....	Newtown, Ind. ....	4th Best.....	2 00
D. Bradfute & Son..	Cedarville, O. ....	5th Best.....	1 00
E. B. Johnson & Sons	Atlanta, Ind. ....	Best Junior Heifer Calf Dropped Since Janu- ary 1, 1909.....	10 00
Lew Kerr.....	Newtown, Ind. ....	2d Best.....	6 00
Lew Kerr.....	Newtown, Ind. ....	3d Best.....	4 00
Ferguson & Hutch- inson .....	Xenia, O. ....	4th Best.....	2 00
B. B. Johnson & Sons	Atlanta, Ind. ....	Best Exhibitor's Herd.....	30 00
D. Bradfute & Son..	Cedarville, O. ....	2d Best.....	20 00
Ferguson & Hutch- inson .....	Xenia, O. ....	3d Best.....	10 00
D. Bradfute & Sons.	Cedarville, O. ....	Best Breeder's Young Herd.....	30 00
Lew Kerr.....	Newtown, Ind. ....	2d Best.....	20 00
Ferguson & Hutch- inson .....	Xenia, O. ....	3d Best.....	10 00
Lew Kerr.....	Newtown, Ind. ....	Best Calf Herd.....	25 00
D. Bradfute & Son..	Cedarville, O. ....	Best Get of Sire.....	20 00
Ferguson & Hutch- inson .....	Xenia, O. ....	2d Best.....	15 00
B. B. Johnson & Sons	Atlanta, Ind. ....	3d Best.....	10 00
D. Bradfute & Son..	Cedarville, O. ....	Best Produce of Cow.....	20 00
B. B. Johnson & Sons	Atlanta, Ind. ....	2d Best.....	15 00
Ferguson & Hutch- inson .....	Xenia, O. ....	3d Best.....	10 00
B. B. Johnson & Sons	Atlanta, Ind. ....	Senior Champion Bull.....	10 00
Lew Kerr.....	Newtown, Ind. ....	Junior Champion Bull.....	10 00
B. B. Johnson & Sons	Atlanta, Ind. ....	Senior Champion Cow.....	10 00
D. Bradfute & Son..	Cedarville, O. ....	Junior Champion Female.....	10 00
B. B. Johnson & Sons	Atlanta, Ind. ....	Grand Champion Bull.....	10 00
B. B. Johnson & Sons	Atlanta, Ind. ....	Grand Champion Female.....	10 00

## HEREFORDS.

Name of Owner.	Postoffice.	Awards.	Amount.
Warren T. McCray..	Kentland, Ind. ....	Best Bull 3 Years or Over.....	\$16 00
Luce & Moxley.....	Shelbyville, Ky. ....	2d Best.....	12 00
John Hooker.....	New London, O. ....	3d Best.....	5 00
Warren T. McCray..	Kentland, Ind. ....	Best Bull 2 Years and Under 3.....	16 00
Merritt Chandler...	Onway, Mich. ....	2d Best.....	12 00
John Hooker.....	New London, O. ....	3d Best.....	5 00
Clem Graves.....	Bunker Hill, Ind. ....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908.....	12 00
Warren T. McCray..	Kentland, Ind. ....	2d Best.....	6 00
John Hooker.....	New London, O. ....	3d Best.....	4 00
Luce & Moxley.....	Shelbyville, Ky. ....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	12 00
Luce & Moxley.....	Shelbyville, Ky. ....	2d Best.....	6 00
Merritt Chandler...	Onway, Mich. ....	3d Best.....	4 00
Warren T. McCray..	Kentland, Ind. ....	Best Senior Bull Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	10 00
Clem Graves.....	Bunker Hill, Ind. ....	2d Best.....	6 00
Warren T. McCray..	Kentland, Ind. ....	3d Best.....	4 00
Warren T. McCray..	Kentland, Ind. ....	4th Best.....	2 00
Luce & Moxley.....	Shelbyville, Ky. ....	5th Best.....	1 00
Clem Graves.....	Bunker Hill, Ind. ....	Best Junior Bull Calf Dropped Since Janu- ary 1, 1909.....	10 00
Warren T. McCray..	Kentland, Ind. ....	2d Best.....	6 00
Luce & Moxley.....	Shelbyville, Ky. ....	3d Best.....	4 00
Clem Graves.....	Bunker Hill, Ind. ....	4th Best.....	2 00
Merritt Chandler...	Onway, Mich. ....	5th Best.....	1 00
Warren T. McCray..	Kentland, Ind. ....	Best Cow 3 Years or Over.....	16 00
Merritt Chandler...	Onway, Mich. ....	2d Best.....	12 00
Luce & Moxley.....	Shelbyville, Ky. ....	3d Best.....	5 00
Merritt Chandler...	Onway, Mich. ....	4th Best.....	3 00
Warren T. McCray..	Kentland, Ind. ....	Best Cow or Heifer 2 Years and Under 3.....	16 00
Merritt Chandler...	Onway, Mich. ....	2d Best.....	12 00
Luce & Moxley.....	Shelbyville, Ky. ....	3d Best.....	5 00
Merritt Chandler...	Onway, Mich. ....	4th Best.....	3 00
Clem Graves.....	Bunker Hill, Ind. ....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	10 00
Warren T. McCray..	Kentland, Ind. ....	2d Best.....	6 00
Warren T. McCray..	Kentland, Ind. ....	3d Best.....	4 00

## HEREFORDS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
Luce & Moxley.....	Shelbyville, Ky.....	4th Best.....	\$2 00
Warren T. McCray..	Kentland, Ind.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	10 00
Luce & Moxley.....	Shelbyville, Ky.....	2d Best.....	6 00
Clem Graves.....	Bunker Hill, Ind.....	3d Best.....	4 00
Warren T. McCray..	Kentland, Ind.....	4th Best.....	2 00
Warren T. McCray..	Kenuand, Ind.....	Best Senior Heifer Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	10 00
Clem Graves.....	Bunker Hill, Ind.....	2d Best.....	6 00
Luce & Moxley.....	Shelbyville, Ky.....	3d Best.....	4 00
Warren T. McCray..	Kentland, Ind.....	4th Best.....	2 00
Merritt Chandler....	Onway, Mich.....	5th Best.....	1 00
Luce & Moxley.....	Shelbyville, Ky.....	Best Junior Heifer Calf Dropped Since Janu- ary 1, 1909.....	10 00
Clem Graves.....	Bunker Hill, Ind.....	2d Best.....	6 00
Merritt Chandler....	Onway, Mich.....	3d Best.....	4 00
Warren T. McCray..	Kentland, Ind.....	4th Best.....	2 00
John Hooker.....	New London, O.....	5th Best.....	1 00
Warren T. McCray..	Kentland, Ind.....	Best Exhibitor's Herd.....	30 00
Luce & Moxley.....	Shelbyville, Ky.....	2d Best.....	20 00
Merritt Chandler....	Onway, Mich.....	3d Best.....	10 00
Warren T. McCray..	Kentland, Ind.....	Best Breeder's Young Herd.....	30 00
Luce & Moxley.....	Shelbyville, Ky.....	2d Best.....	20 00
Clem Graves.....	Bunker Hill, Ind.....	3d Best.....	10 00
Warren T. McCray..	Kentland, Ind.....	Best Calf Herd.....	25 00
Warren T. McCray..	Kentland, Ind.....	Best Get of Sire.....	20 00
Luce & Moxley.....	Shelbyville, Ky.....	2d Best.....	15 00
Clem Graves.....	Bunker Hill, Ind.....	3d Best.....	10 00
Warren T. McCray..	Kentland, Ind.....	Best Produce of Cow.....	20 00
Luce & Moxley.....	Shelbyville, Ky.....	2d Best.....	15 00
Clem Graves.....	Bunker Hill, Ind.....	3d Best.....	10 00
Warren T. McCray..	Kentland, Ind.....	Senior Champion Bull.....	10 00
Luce & Moxley.....	Shelbyville, Ky.....	Junior Champion Bull.....	10 00
Warren T. McCray..	Kentland, Ind.....	Senior Champion Cow.....	10 00
Warren T. McCray..	Kentland, Ind.....	Junior Champion Female.....	10 00
Luce & Moxley.....	Shelbyville, Ky.....	Grand Champion Bull.....	10 00
Warren T. McCray..	Kentland, Ind.....	Grand Champion Female.....	10 00

## POLLED DURHAMS.

Name of Owner.	Postoffice.	Awards.	Amount.
W. H. Miller & Sons	Mulberry, Ind.....	Best Bull 3 Years or Over.....	\$15 00
A. L. & B. Edwards..	Versailles, Ky.....	2d Best.....	6 00
Vollmer Bros.....	Osgood, Ind.....	3d Best.....	3 00
J. H. Miller.....	Peru, Ind.....	Best Bull 2 Years and Under 3.....	15 00
J. H. Miller.....	Peru, Ind.....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908.....	10 00
Vollmer Bros.....	Osgood, Ind.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	10 00
J. H. Miller.....	Peru, Ind.....	Best Senior Bull Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	8 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	4 00
J. H. Miller.....	Peru, Ind.....	3d Best.....	3 00
Vollmer Bros.....	Osgood, Ind.....	4th Best.....	2 00
W. H. Miller & Sons	Mulberry, Ind.....	Best Junior Bull Calf Dropped Since Janu- ary 1, 1909.....	8 00
J. H. Miller.....	Peru, Ind.....	2d Best.....	4 00
A. L. & B. Edwards..	Versailles, Ky.....	3d Best.....	3 00
A. L. & B. Edwards..	Versailles, Ky.....	4th Best.....	2 00
J. H. Miller.....	Peru, Ind.....	Best Cow 3 Years or Over.....	15 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	6 00
Vollmer Bros.....	Osgood, Ind.....	3d Best.....	3 00
Rosenberger & Ed- wards.....	Tiffin, O.....	4th Best.....	2 00
J. H. Miller.....	Peru, Ind.....	Best Cow or Heifer 2 Years and Under 3.....	15 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	6 00
J. H. Miller.....	Peru, Ind.....	3d Best.....	3 00
W. H. Miller & Sons	Mulberry, Ind.....	4th Best.....	2 00
W. H. Miller & Sons	Mulberry, Ind.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	8 00
J. H. Miller.....	Peru, Ind.....	2d Best.....	4 00
J. H. Miller.....	Peru, Ind.....	3d Best.....	3 00
A. L. & B. Edwards..	Versailles, Ky.....	4th Best.....	2 00
J. H. Miller.....	Peru, Ind.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	8 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	4 00

## POLLED DURHAMS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
J. H. Miller.....	Peru, Ind.....	3d Best.....	\$3 00
W. H. Miller & Sons	Mulberry, Ind.....	4th Best.....	2 00
W. H. Miller & Sons	Mulberry, Ind.....	Best Senior Heifer Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	8 00
J. H. Miller.....	Peru, Ind.....	2d Best.....	4 00
A. L. & B. Edwards	Versailles, Ky.....	3d Best.....	2 00
A. L. & B. Edwards	Versailles, Ky.....	4th Best.....	2 00
J. H. Miller.....	Peru, Ind.....	5th Best.....	1 00
J. H. Miller.....	Peru, Ind.....	Best Junior Heifer Calf Dropped Since Janu- ary 1, 1909.....	8 00
J. H. Miller.....	Peru, Ind.....	2d Best.....	4 00
Vollmer Bros.....	Osgood, Ind.....	3d Best.....	3 00
J. H. Miller.....	Peru, Ind.....	Best Exhibitor's Herd.....	25 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	20 00
Vollmer Bros.....	Osgood, Ind.....	3d Best.....	10 00
J. H. Miller.....	Peru, Ind.....	Best Breeder's Young Herd.....	25 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	20 00
Vollmer Bros.....	Osgood, Ind.....	3d Best.....	10 00
J. H. Miller.....	Peru, Ind.....	Best Calf Herd.....	20 00
Vollmer Bros.....	Osgood, Ind.....	2d Best.....	15 00
J. H. Miller.....	Peru, Ind.....	Best Get of Sire.....	15 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	8 00
J. H. Miller.....	Peru, Ind.....	3d Best.....	5 00
J. H. Miller.....	Peru, Ind.....	Best Produce of Cow.....	15 00
W. H. Miller & Sons	Mulberry, Ind.....	2d Best.....	8 00
A. L. & B. Edwards	Versailles, Ky.....	3d Best.....	5 00
J. H. Miller.....	Peru, Ind.....	Senior Champion Bull.....	15 00
J. H. Miller.....	Peru, Ind.....	Junior Champion Bull.....	15 00
J. H. Miller.....	Peru, Ind.....	Senior Champion Cow.....	15 00
W. H. Miller & Sons	Mulberry, Ind.....	Junior Champion Female.....	15 00
J. H. Miller.....	Peru, Ind.....	Grand Champion Bull.....	15 00
J. H. Miller.....	Peru, Ind.....	Grand Champion Female.....	15 00

## GALLOWAYS.

Name of Owner.	Postoffice.	Awards.	Amount.
James Frantz & Sons	Bluffton, O.....	Best Bull 3 Years or Over.....	\$12 00
John Chamberlin.....	Flat Rock, Mich.....	2d Best.....	6 00
James Frantz & Sons	Bluffton, O.....	Best Bull 2 Years and Under 3.....	12 00
James Frantz & Sons	Bluffton, O.....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908.....	10 00
James Frantz & Sons	Bluffton, O.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	10 00
James Frantz & Sons	Bluffton, O.....	Best Senior Bull Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	8 00
John Chamberlin.....	Flat Rock, Mich.....	2d Best.....	4 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	3 00
James Frantz & Sons	Bluffton, O.....	Best Junior Bull Calf Dropped Since Janu- ary 1, 1909.....	8 00
James Frantz & Sons	Bluffton, O.....	2d Best.....	4 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	3 00
James Frantz & Sons	Bluffton, O.....	Best Cow 3 Years or Over.....	12 00
James Frantz & Sons	Bluffton, O.....	2d Best.....	6 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	3 00
James Frantz & Sons	Bluffton, O.....	Best Cow or Heifer 2 Years and Under 3.....	12 00
James Frantz & Sons	Bluffton, O.....	2d Best.....	6 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	3 00
James Frantz & Sons	Bluffton, O.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	8 00
John Chamberlin.....	Flat Rock, Mich.....	2d Best.....	4 00
James Frantz & Sons	Bluffton, O.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	8 00
John Chamberlin.....	Flat Rock, Mich.....	Best Senior Heifer Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	8 00
John Chamberlin.....	Flat Rock, Mich.....	2d Best.....	4 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	3 00
James Frantz & Sons	Bluffton, O.....	4th Best.....	2 00
James Frantz & Sons	Bluffton, O.....	Best Junior Heifer Calf Dropped Since Janu- ary 1, 1909.....	8 00
John Chamberlin.....	Flat Rock, Mich.....	2d Best.....	4 00
James Frantz & Sons	Bluffton, O.....	Best Exhibitor's Herd.....	20 00
James Frantz & Sons	Bluffton, O.....	2d Best.....	15 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	5 00
James Frantz & Sons	Bluffton, O.....	Best Breeder's Young Herd.....	20 00
John Chamberlin.....	Flat Rock, Mich.....	Best Calf Herd.....	15 00

## GALLOWAYS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
James Frantz & Sons	Bluffton, O.....	Best Get of Sire.....	\$12 00
James Frantz & Sons	Bluffton, O.....	2d Best.....	6 00
John Chamberlin.....	Flat Rock, Mich.....	3d Best.....	4 00
James Frantz & Sons	Bluffton, O.....	Best Produce of Cow.....	12 00
James Frantz & Sons	Bluffton, O.....	2d Best.....	6 00
James Frantz & Sons	Bluffton, O.....	3d Best.....	4 00
James Frantz & Sons	Bluffton, O.....	Senior Champion Bull.....	10 00
James Frantz & Sons	Bluffton, O.....	Junior Champion Bull.....	10 00
James Frantz & Sons	Bluffton, O.....	Senior Champion Cow.....	10 00
John Chamberlin.....	Flat Rock, Mich.....	Junior Champion Female.....	10 00
James Frantz & Sons	Bluffton, O.....	Grand Champion Bull.....	10 00
James Frantz & Sons	Bluffton, O.....	Grand Champion Female.....	10 00

## JERSEYS.

Name of Owner.	Postoffice.	Awards.	Amount.
John F. Boyd.....	Rushville, Ind.....	Best Bull 3 Years or Over.....	\$16 00
Good Hold Farm.....	Mentor, O.....	2d Best.....	12 00
J. V. Chambers & Son	West Alexandria, Pa.	3d Best.....	5 00
The Hartman Stock Farm	Columbus, O.....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908.....	12 00
Good Hold Farm.....	Mentor O.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	12 00
John F. Boyd.....	Rushville, Ind.....	2d Best.....	6 00
J. V. Chambers & Sons	West Alexandria, Pa.	3d Best.....	4 00
John F. Boyd.....	Rushville, Ind.....	Best Senior Bull Calf Dropped Between September 1, 1908, and January 1, 1909.....	10 00
The Hartman Stock Farm	Columbus, O.....	2d Best.....	6 00
The Hartman Stock Farm	Columbus, O.....	3d Best.....	4 00
C. B. Ross.....	Blanchester, O.....	4th Best.....	2 00
J. V. Chambers & Sons	West Alexandria, Pa.	5th Best.....	1 00
Good Hold Farm.....	Mentor, O.....	Best Junior Bull Calf Dropped Since January 1, 1909.....	10 00
C. B. Ross.....	Blanchester, O.....	2d Best.....	6 00
C. B. Ross.....	Blanchester, O.....	3d Best.....	4 00
J. V. Chambers & Sons	West Alexandria, Pa.	4th Best.....	2 00
Good Hold Farm.....	Mentor, O.....	5th Best.....	1 00
John F. Boyd.....	Rushville, Ind.....	Best Cow 3 Years or Over.....	16 00
J. V. Chambers & Sons	West Alexandria, Pa.	2d Best.....	12 00
The Hartman Stock Farm	Columbus, O.....	3d Best.....	5 00
John F. Boyd.....	Rushville, Ind.....	4th Best.....	3 00
The Hartman Stock Farm	Columbus, O.....	Best Cow or Heifer 2 Years and Under 3.....	16 00
John F. Boyd.....	Rushville, Ind.....	2d Best.....	12 00
Good Hold Farm.....	Mentor, O.....	3d Best.....	5 00
The Hartman Stock Farm	Columbus, O.....	4th Best.....	3 00
C. B. Ross.....	Blanchester, O.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	10 00
The Hartman Stock Farm	Columbus, O.....	2d Best.....	6 00
The Hartman Stock Farm	Columbus, O.....	3d Best.....	4 00
The Hartman Stock Farm	Columbus, O.....	4th Best.....	2 00
John F. Boyd.....	Rushville, Ind.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	10 00
Good Hold Farm.....	Mentor O.....	2d Best.....	6 00
Good Hold Farm.....	Mentor, O.....	3d Best.....	4 00
J. V. Chambers & Sons	West Alexandria, Pa.	4th Best.....	2 00
John F. Boyd.....	Rushville, Ind.....	Best Senior Heifer Calf Dropped Between September 1, 1908, and January 1, 1909.....	10 00
John F. Boyd.....	Rushville, Ind.....	2d Best.....	6 00
J. V. Chambers & Sons	West Alexandria, Pa.	3d Best.....	4 00
The Hartman Stock Farm	Columbus, O.....	4th Best.....	2 00

## JERSEYS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
J. V. Chambers & Sons	West Alexandria, Pa.	5th Best.....	\$1 00
The Hartman Stock Farm	Columbus, O.....	Best Junior Heifer Calf Dropped Since January 1, 1909.....	10 00
John F. Boyd.....	Rushville, Ind.....	2d Best.....	6 00
Good Hold Farm.....	Mentor, O.....	3d Best.....	4 00
C. B. Ross.....	Blanchester, O.....	4th Best.....	2 00
Good Hold Farm.....	Mentor, O.....	5th Best.....	1 00
John F. Boyd.....	Rushville, Ind.....	Best Exhibitor's Herd.....	30 00
The Hartman Stock Farm	Columbus, O.....	2d Best.....	20 00
J. V. Chambers & Sons	West Alexandria, Pa.	3d Best.....	10 00
John F. Boyd.....	Rushville, Ind.....	Best Breeder's Young Herd.....	30 00
Good Hold Farm.....	Mentor, O.....	2d Best.....	20 00
The Hartman Stock Farm	Columbus, O.....	3d Best.....	10 00
John F. Boyd.....	Rushville, Ind.....	Best Calf Herd.....	25 00
Good Hold Farm.....	Mentor, O.....	2d Best.....	20 00
C. B. Ross.....	Blanchester.....	3d Best.....	10 00
John F. Boyd.....	Rushville, Ind.....	Best Get of Sire.....	20 00
Good Hold Farm.....	Mentor, O.....	2d Best.....	15 00
The Hartman Stock Farm	Columbus, O.....	3d Best.....	10 00
John F. Boyd.....	Rushville, Ind.....	Best Produce of Cow.....	20 00
C. B. Ross.....	Blanchester, O.....	2d Best.....	15 00
J. V. Chambers & Sons	West Alexandria, Pa.	3d Best.....	10 00
John F. Boyd.....	Rushville, Ind.....	Senior Champion Bull.....	10 00
Good Hold Farm.....	Mentor, O.....	Junior Champion Bull.....	10 00
John F. Boyd.....	Rushville, Ind.....	Senior Champion Cow.....	10 00
John F. Boyd.....	Rushville, Ind.....	Junior Champion Female.....	10 00
Good Hold Farm.....	Mentor, O.....	Grand Champion Bull.....	10 00
John F. Boyd.....	Rushville, Ind.....	Grand Champion Female.....	10 00

## HOLSTEINS.

Name of Owner.	Postoffice.	Awards.	Amount.
F. E. Eager & Son...	Howell, Mich.....	Best Bull 3 Years or Over.....	\$16 00
Paxton & Wylie....	Houston, Pa.....	2d Best.....	12 00
Paxton & Wylie....	Houston, Pa.....	3d Best.....	5 00
Paxton & Wylie....	Houston, Pa.....	Best Bull 2 Years and Under 3.....	16 00
Pierson Stock Farm	Hadley, Mich.....	2d Best.....	12 00
J. R. Ross & Sons...	Blanchester, O.....	3d Best.....	5 00
J. R. Ross & Sons...	Blanchester, O.....	Best Senior Yearling Bull Dropped Between September 1, 1907, and January 1, 1908.....	12 00
Paxton & Wylie....	Houston, Pa.....	2d Best.....	6 00
F. E. Eager & Son...	Howell, Mich.....	3d Best.....	4 00
F. E. Eager & Son...	Howell, Mich.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	12 00
Pierson Stock Farm	Hadley, Mich.....	2d Best.....	6 00
Paxton & Wylie....	Houston, Pa.....	3d Best.....	4 00
Pierson Stock Farm	Hadley, Mich.....	Best Senior Bull Calf Dropped Between September 1, 1908, and January 1, 1909.....	10 00
Derrers Bros.....	Camp Chase, O.....	2d Best.....	6 00
Pierson Stock Farm	Hadley, Mich.....	3d Best.....	4 00
Derrers Bros.....	Camp Chase, O.....	4th Best.....	2 00
J. R. Ross & Sons...	Blanchester, O.....	5th Best.....	1 00
Derrers Bros.....	Camp Chase, O.....	Best Junior Bull Calf Dropped Since January 1, 1909.....	10 00
F. E. Eager & Son...	Howell, Mich.....	2d Best.....	6 00
J. R. Ross & Sons...	Blanchester, O.....	3d Best.....	4 00
F. E. Eager & Son...	Howell, Mich.....	4th Best.....	2 00
Paxton & Wylie....	Houston, Pa.....	5th Best.....	1 00
F. E. Eager & Son...	Howell, Mich.....	Best Cow 3 Years or Over.....	16 00
Paxton & Wylie....	Houston, Pa.....	2d Best.....	12 00
Pierson Stock Farm	Hadley, Mich.....	3d Best.....	5 00
Paxton & Wylie....	Houston, Pa.....	4th Best.....	3 00
Derrers Bros.....	Camp Chase, O.....	Best Cow or Heifer 2 Years and Under 3.....	16 00
E. L. Zehring.....	Germantown, O.....	2d Best.....	12 00
F. E. Eager & Sons...	Howell, Mich.....	3d Best.....	5 00
Paxton & Wylie....	Houston, Pa.....	4th Best.....	3 00
Paxton & Wylie....	Houston, Pa.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	10 00
E. L. Zehring.....	Germantown, O.....	2d Best.....	6 00

## HOLSTEINS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
J. R. Ross & Sons..	Blanchester, O.....	3d Best.....	\$4 00
Pierson Stock Farm..	Hadley, Mich.....	4th Best.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	10 00
F. E. Eager & Son..	Howell, Mich.....	2d Best.....	6 00
Carl M. Watts.....	Columbus, O., Sta C.	3d Best.....	4 00
Carl M. Watts.....	Columbus, O., Sta C.	4th Best.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	Best Senior Heifer Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	10 00
Derrerr Bros.....	Camp Chase, O.....	2d Best.....	6 00
Derrerr Bros.....	Camp Chase, O.....	3d Best.....	4 00
E. L. Zehring.....	Germantown, O.....	4th Best.....	2 00
Pierson Stock Farm	Hadley, Mich.....	5th Best.....	1 00
E. L. Zehring.....	Germantown, O.....	Best Junior Heifer Calf Dropped Since Janu- ary 1, 1909.....	10 00
F. E. Eager & Son..	Howell, Mich.....	2d Best.....	6 00
J. R. Ross & Sons..	Blanchester, O.....	3d Best.....	4 00
F. E. Eager & Son..	Howell, Mich.....	4th Best.....	2 00
Derrerr Bros.....	Camp Chase, O.....	5th Best.....	1 00
F. E. Eager & Son..	Howell, Mich.....	Best Exhibitor's Herd.....	30 00
Paxton & Wylie....	Houston, Pa.....	2d Best.....	20 00
Pierson Stock Farm..	Hadley, Mich.....	3d Best.....	10 00
J. R. Ross & Sons..	Blanchester, O.....	Best Breeder's Young Herd.....	30 00
Pierson Stock Farm..	Hadley, Mich.....	2d Best.....	20 00
F. E. Eager & Son..	Howell, Mich.....	3d Best.....	10 00
Pierson Stock Farm..	Hadley, Mich.....	Best Calf Herd.....	25 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	20 00
F. E. Eager & Son..	Howell, Mich.....	3d Best.....	10 00
Paxton & Wylie....	Houston, Pa.....	Best Get of Sire.....	20 00
F. E. Eager & Son..	Howell, Mich.....	2d Best.....	15 00
Derrerr Bros.....	Camp Chase, O.....	3d Best.....	10 00
Paxton & Wylie....	Houston, Pa.....	Best Produce of Cow.....	20 00
E. L. Zehring.....	Germantown, O.....	2d Best.....	15 00
J. R. Ross & Sons..	Blanchester, O.....	3d Best.....	10 00
F. E. Eager & Son..	Howell, Mich.....	Senior Champion Bull.....	10 00
Pierson Stock Farm..	Hadley, Mich.....	Junior Champion Bull.....	10 00
F. E. Eager & Son..	Howell, Mich.....	Senior Champion Cow.....	10 00
Paxton & Wylie....	Houston, Pa.....	Junior Champion Female.....	10 00
F. E. Eager & Son..	Howell, Mich.....	Grand Champion Bull.....	10 00
F. E. Eager & Son..	Howell, Mich.....	Grand Champion Female.....	10 00

## RED POLLS.

Name of Owner.	Postoffice.	Awards.	Amount.
Frank Hartline.....	Strasburg, O.....	Best Bull 3 Years or Over.....	\$12 00
C. A. Shurtz.....	Gaysport, O.....	2d Best.....	6 00
Geo. Inelchen & Sons	Geneva, Ind.....	3d Best.....	3 00
M. F. Prewett.....	Eaton's, W. Va.....	Best Junior Yearling Bull Dropped Between January 1, 1908, and September 1, 1908.....	10 00
Geo. Inelchen & Sons	Geneva, Ind.....	Best Senior Bull Calf Dropped Between Sep- tember 1, 1908, and January 1, 1909.....	8 00
C. A. Shurtz.....	Gaysport, O.....	2d Best.....	4 00
Frank Hartline.....	Strasburg, O.....	3d Best.....	3 00
Frank Hartline.....	Strasburg, O.....	Best Junior Bull Calf Dropped Since Janu- ary 1, 1909.....	8 00
Frank Hartline.....	Strasburg, O.....	2d Best.....	4 00
Geo. Inelchen & Sons	Geneva, Ind.....	3d Best.....	3 00
M. F. Prewett.....	Eaton's, W. Va.....	4th Best.....	2 00
C. A. Shurtz.....	Gaysport, O.....	Best Cow 3 Years or Over.....	12 00
Frank Hartline.....	Strasburg, O.....	2d Best.....	6 00
C. A. Shurtz.....	Gaysport, O.....	3d Best.....	3 00
Frank Hartline.....	Strasburg, O.....	4th Best.....	2 00
Geo. Inelchen & Sons	Geneva, Ind.....	Best Cow or Heifer 2 Years and Under 3.....	12 00
C. A. Shurtz.....	Gaysport, O.....	2d Best.....	6 00
C. A. Shurtz.....	Gaysport, O.....	3d Best.....	3 00
Frank Hartline.....	Strasburg, O.....	4th Best.....	2 00
C. A. Shurtz.....	Gaysport, O.....	Best Senior Yearling Heifer Dropped Between September 1, 1907, and January 1, 1908.....	8 00
C. A. Shurtz.....	Gaysport, O.....	2d Best.....	4 00
Geo. Inelchen & Sons	Geneva, Ind.....	3d Best.....	3 00
M. F. Prewett.....	Eaton's, W. Va.....	4th Best.....	2 00
Frank Hartline.....	Strasburg, O.....	Best Junior Yearling Heifer Dropped Between January 1, 1908, and September 1, 1908.....	8 00
Frank Hartline.....	Strasburg, O.....	2d Best.....	4 00
Geo. Inelchen & Sons	Geneva, Ind.....	3d Best.....	3 00
C. A. Shurtz.....	Gaysport, O.....	4th Best.....	2 00



## RED POLLS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
Frank Hartline.....	Strasburg, O.....	Best Senior Heifer Calf Dropped Between September 1, 1908, and January 1, 1909.....	\$8 00
Frank Hartline.....	Strasburg, O.....	2d Best.....	4 00
C. A. Shurtz.....	Gaysport, O.....	3d Best.....	3 00
Geo. Ineichen & Sons	Geneva, Ind.....	4th Best.....	2 00
M. F. Prewett.....	Eaton's W. Va.....	5th Best.....	1 00
Frank Hartline.....	Strasburg, O.....	Best Junior Heifer Calf Dropped Since January 1, 1909.....	8 00
C. A. Shurtz.....	Gaysport, O.....	2d Best.....	4 00
Geo. Ineichen & Sons	Geneva, Ind.....	3d Best.....	3 00
Frank Hartline.....	Strasburg, O.....	4th Best.....	2 00
M. F. Prewett.....	Eaton's, Pa.....	5th Best.....	1 00
C. A. Shurtz.....	Gaysport, O.....	Best Exhibitor's Herd.....	20 00
Frank Hartline.....	Strasburg, O.....	2d Best.....	15 00
Geo. Ineichen & Sons	Geneva, Ind.....	3d Best.....	5 00
C. A. Shurtz.....	Gaysport, O.....	Best Breeder's Young Herd.....	20 00
Frank Hartline.....	Strasburg, O.....	2d Best.....	15 00
Geo. Ineichen & Sons	Geneva, Ind.....	3d Best.....	5 00
Frank Hartline.....	Strasburg, O.....	Best Calf Herd.....	15 00
Frank Hartline.....	Strasburg, O.....	Best Get of Sire.....	12 00
Geo. Ineichen & Sons	Geneva, Ind.....	2d Best.....	6 00
C. A. Shurtz.....	Gaysport, O.....	3d Best.....	4 00
C. A. Shurtz.....	Gaysport, O.....	Best Produce of Cow.....	12 00
Geo. Ineichen & Sons	Geneva, Ind.....	2d Best.....	6 00
Frank Hartline.....	Strasburg, O.....	3d Best.....	4 00
Frank Hartline.....	Strasburg, O.....	Senior Champion Bull.....	10 00
Frank Hartline.....	Strasburg, O.....	Junior Champion Bull.....	10 00
C. A. Shurtz.....	Gaysport, O.....	Senior Champion Cow.....	10 00
Frank Hartline.....	Strasburg, O.....	Junior Champion Female.....	10 00
Frank Hartline.....	Strasburg, O.....	Grand Champion Bull.....	10 00
C. A. Shurtz.....	Gaysport, O.....	Grand Champion Female.....	10 00

## GUERNSEYS.

Name of Owner.	Postoffice.	Awards.	Amount.
W. D. Phelps.....	Farmville, Va.....	Best Bull 3 Years or Over.....	\$15 00
Chestnut Hill Farm.....	Coalburg, O.....	2d Best.....	10 00
W. H. Bell & Son.....	Scott's Station, Ky.....	3d Best.....	5 00
W. D. Phelps.....	Farmville, Va.....	Best Bull 2 Years and Under 3.....	15 00
W. H. Bell & Son.....	Scott's Station, Ky.....	2d Best.....	10 00
W. H. Bell & Son.....	Scott's Station, Ky.....	3d Best.....	5 00
W. D. Phelps.....	Farmville, Va.....	Best Bull 1 Year and Under 2.....	10 00
Chestnut Hill Farm.....	Coalburg, O.....	2d Best.....	7 00
J. M. Elliott.....	Columbus, O., Sta. A.....	3d Best.....	4 00
W. D. Phelps.....	Farmville, Va.....	Best Bull Under 1 Year.....	8 00
W. H. Bell & Son.....	Scott's Station, Ky.....	2d Best.....	5 00
Chestnut Hill Farm.....	Coalburg, O.....	3d Best.....	3 00
Chestnut Hill Farm.....	Coalburg, O.....	Best Cow 3 Years or Over.....	15 00
W. H. Bell & Son.....	Scott's Station, Ky.....	2d Best.....	10 00
W. H. Bell & Son.....	Scott's Station, Ky.....	3d Best.....	5 00
W. H. Bell & Son.....	Scott's Station, Ky.....	Best Cow or Heifer 2 Years and Under 3.....	15 00
W. D. Phelps.....	Farmville, Va.....	2d Best.....	10 00
W. D. Phelps.....	Farmville, Va.....	3d Best.....	5 00
W. D. Phelps.....	Farmville, Va.....	Best Heifer 1 Year and Under 2.....	10 00
W. H. Bell & Son.....	Scott's Station, Ky.....	2d Best.....	7 00
W. D. Phelps.....	Farmville, Va.....	3d Best.....	4 00
Chestnut Hill Farm.....	Coalburg, O.....	Best Heifer Under 1 Year.....	8 00
W. H. Bell & Son.....	Scott's Station, Ky.....	2d Best.....	5 00
Chestnut Hill Farm.....	Coalburg, O.....	3d Best.....	3 00
Chestnut Hill Farm.....	Coalburg, O.....	Best Exhibitor's Herd.....	25 00
W. H. Bell & Son.....	Scott's Station, Ky.....	2d Best.....	15 00
W. D. Phelps.....	Farmville, Va.....	3d Best.....	10 00
W. D. Phelps.....	Farmville, Va.....	Best Breeder's Young Herd.....	25 00
Chestnut Hill Farm.....	Coalburg, O.....	2d Best.....	15 00
W. H. Bell & Son.....	Scott's Station, Ky.....	3d Best.....	10 00
W. D. Phelps.....	Farmville, Va.....	Best Get of Sire.....	15 00
W. D. Phelps.....	Farmville, Va.....	2d Best.....	10 00
Chestnut Hill Farm.....	Coalburg, O.....	3d Best.....	5 00
W. H. Bell & Son.....	Scott's Station, Ky.....	Best Produce of Cow.....	15 00
W. D. Phelps.....	Farmville, Va.....	2d Best.....	10 00
W. D. Phelps.....	Farmville, Va.....	3d Best.....	5 00

## AYRSHIRES.

Name of Owner.	Postoffice.	Awards.	Amount.
W. W. Blake Arkcoll	Paoli, Pa.	Best Bull 3 Years or Over.	\$15 00
W. L. McCormick	Pataskala, O.	2d Best.	10 00
W. L. McCormick	Pataskala, O.	Best Bull 2 Years and Under 3.	15 00
W. W. Blake Arkcoll	Paoli, Pa.	2d Best.	10 00
W. L. McCormick	Pataskala, O.	Best Bull 1 Year and Under 2.	10 00
W. W. Blake Arkcoll	Paoli, Pa.	Best Bull Under 1 Year.	8 00
W. W. Blake Arkcoll	Paoli, Pa.	2d Best.	5 00
W. W. Blake Arkcoll	Paoli, Pa.	3d Best.	3 00
W. W. I.	Paoli, Pa.	Best Cow 3 Years or Over.	15 00
W. L. I.	Pataskala, O.	2d Best.	10 00
W. W. I.	Paoli, Pa.	3d Best.	5 00
W. L. I.	Pataskala, O.	Best Cow or Heifer 2 Years and Under 3.	15 00
W. W. I.	Paoli, Pa.	2d Best.	10 00
W. W. I.	Paoli, Pa.	3d Best.	5 00
W. L. M.	Pataskala, O.	Best Heifer 1 Year and Under 2.	10 00
W. W. I.	Paoli, Pa.	2d Best.	7 00
W. W. I.	Paoli, Pa.	3d Best.	4 00
W. W. I.	Paoli, Pa.	Best Heifer Under 1 Year.	8 00
W. L. I.	Pataskala, O.	2d Best.	5 00
W. W. I.	Paoli, Pa.	3d Best.	3 00
W. W. I.	Paoli, Pa.	Best Exhibitor's Herd.	25 00
W. L. I.	Pataskala, O.	2d Best.	15 00
W. W. I.	Paoli, Pa.	3d Best.	10 00
W. W. I.	Paoli, Pa.	Best Breeder's Young Herd.	25 00
W. L. I.	Pataskala, O.	2d Best.	15 00
W. L. I.	Pataskala, O.	Best Get of Sire.	15 00
W. W. I.	Paoli, Pa.	2d Best.	10 00
W. L. I.	Pataskala, O.	Best Produce of Cow.	15 00
W. W. I.	Paoli, Pa.	2d Best.	10 00

## DEVONS.

Name of Owner.	Postoffice.	Awards.	Amount.
The Wheeler Home- stead	Kanona, N. Y.	Best Bull 3 Years or Over.	\$15 00
James C. Shaw	Newark, O.	2d Best.	10 00
James C. Shaw	Newark, O.	3d Best.	5 00
The Wheeler Home- stead	Kanona, N. Y.	Best Bull 2 Years and Under 3.	15 00
The Wheeler Home- stead	Kanona, N. Y.	Best Bull 1 Year and Under 2.	10 00
James C. Shaw	Newark, O.	2d Best.	7 00
James C. Shaw	Newark, O.	Best Bull Under 1 Year.	8 00
The Wheeler Home- stead	Kanona, N. Y.	2d Best.	5 00
The Wheeler Home- stead	Kanona, N. Y.	Best Cow 3 Years or Over.	15 00
James C. Shaw	Newark, O.	2d Best.	10 00
The Wheeler Home- stead	Kanona, N. Y.	3d Best.	5 00
The Wheeler Home- stead	Kanona, N. Y.	Best Cow or Heifer 2 Years and Under 3.	15 00
The Wheeler Home- stead	Kanona, N. Y.	2d Best.	10 00
James C. Shaw	Newark, O.	3d Best.	5 00
The Wheeler Home- stead	Kanona, N. Y.	Best Heifer 1 Year and Under 2.	10 00
The Wheeler Home- stead	Kanona, N. Y.	2d Best.	7 00
James C. Shaw	Newark, O.	3d Best.	4 00
James C. Shaw	Newark, O.	Best Heifer Under 1 Year.	8 00
The Wheeler Home- stead	Kanona, N. Y.	2d Best.	5 00
James C. Shaw	Newark, O.	3d Best.	3 00
The Wheeler Home- stead	Kanona, N. Y.	Best Exhibitor's Herd.	25 00
James C. Shaw	Newark, O.	2d Best.	15 00
James C. Shaw	Newark, O.	3d Best.	10 00
James C. Shaw	Newark, O.	Best Breeder's Young Herd.	25 00
James C. Shaw	Newark, O.	Best Get of Sire.	15 00
The Wheeler Home- stead	Kanona, N. Y.	2d Best.	10 00
James C. Shaw	Newark, O.	3d Best.	5 00
The Wheeler Home- stead	Kanona, N. Y.	Best Produce of Cow.	15 00
James C. Shaw	Newark, O.	2d Best.	10 00
James C. Shaw	Newark, O.	3d Best.	5 00

## BROWN SWISS.

Name of Owner.	Postoffice.	Awards.	Amount.
H. W. Ayers.....	Honey Creek, Wis..	Best Bull 3 Years or Over.....	\$15 00
Hull Bros.....	Painesville, O.....	2d Best.....	10 00
Hull Bros.....	Painesville, O.....	Best Bull 2 Years and Under 3.....	15 00
A. F. Wampler.....	Dayton, O.....	2d Best.....	10 00
H. W. Ayers.....	Honey Creek, Wis..	3d Best.....	5 00
H. W. Ayers.....	Honey Creek, Wis..	Best Bull 1 Year and Under 2.....	10 00
Hull Bros.....	Painesville, O.....	2d Best.....	7 00
A. F. Wampler.....	Dayton, O.....	3d Best.....	4 00
Hull Bros.....	Painesville, O.....	Best Bull Under 1 Year.....	8 00
H. W. Ayers.....	Honey Creek, Wis..	2d Best.....	5 00
Hull Bros.....	Painesville, O.....	3d Best.....	3 00
H. W. Ayers.....	Honey Creek, Wis..	Best Cow 3 Years or Over.....	15 00
Hull Bros.....	Painesville, O.....	2d Best.....	10 00
Hull Bros.....	Painesville, O.....	3d Best.....	5 00
Hull Bros.....	Painesville, O.....	Best Cow or Heifer 2 Years and Under 3.....	15 00
H. W. Ayers.....	Honey Creek, Wis..	2d Best.....	10 00
A. F. Wampler.....	Dayton, O.....	3d Best.....	5 00
Hull Bros.....	Painesville, O.....	Best Heifer 1 Year and Under 2.....	10 00
H. W. Ayers.....	Honey Creek, Wis..	2d Best.....	7 00
H. W. Ayers.....	Honey Creek, Wis..	3d Best.....	4 00
Hull Bros.....	Painesville, O.....	Best Heifer Under 1 Year.....	8 00
Hull Bros.....	Painesville, O.....	2d Best.....	5 00
Hull Bros.....	Painesville, O.....	3d Best.....	3 00
Hull Bros.....	Painesville, O.....	Best Exhibitor's Herd.....	25 00
H. W. Ayers.....	Honey Creek, Wis..	2d Best.....	15 00
A. F. Wampler.....	Dayton, O.....	3d Best.....	10 00
Hull Bros.....	Painesville, O.....	Best Breeder's Young Herd.....	25 00
H. W. Ayers.....	Honey Creek, Wis..	2d Best.....	15 00
Hull Bros.....	Painesville, O.....	Best Get of Sire.....	15 00
H. W. Ayers.....	Honey Creek, Wis..	2d Best.....	10 00
A. F. Wampler.....	Dayton, O.....	3d Best.....	5 00
H. W. Ayers.....	Honey Creek, Wis..	Best Produce of Cow.....	15 00
Hull Bros.....	Painesville, O.....	2d Best.....	10 00
Hull Bros.....	Painesville, O.....	3d Best.....	5 00

## FAT CATTLE.

Name of Owner.	Postoffice.	Awards.	Amount.
Carpenter & Ross...	Mansfield, O.....	Best Steer or Spayed Heifer 2 Years and Under 3.....	\$30 00
Mart L. McCoy.....	Washington C. H., O.....	2d Best.....	20 00
Mart L. McCoy.....	Washington C. H., O.....	3d Best.....	10 00
D. Bradfute & Son...	Cedarville, O.....	Best Steer or Spayed Heifer 1 Year and Under 2.....	30 00
Carpenter & Ross...	Mansfield, O.....	2d Best.....	20 00
Mart L. McCoy.....	Washington C. H., O.....	3d Best.....	10 00
Carpenter & Ross...	Mansfield, O.....	Best Steer or Spayed Heifer Under 1 Year.....	30 00
Thomas Johnson.....	Columbus, O.....	2d Best.....	20 00
Lew Kerr.....	Newtown, Ind.....	3d Best.....	10 00
Carpenter & Ross...	Mansfield, O.....	Best Exhibitor's Herd.....	30 00
Mart L. McCoy.....	Washington C. H., O.....	2d Best.....	20 00
Thomas Johnson.....	Columbus, O.....	3d Best.....	10 00
Carpenter & Ross...	Mansfield, O.....	Champion Steer or Spayed Heifer.....	10 00

## THIRD DEPARTMENT—SWINE

J. F. CROSS, Member in Charge.

J. MAT KLEVER..... Superintendent  
 H. F. FRICKE..... Clerk

## JUDGES.

W. T. HARRIS,

J. C. HENDRICK.

Received from pen rent, 1909.....	\$455 00
Premiums offered, 1909.....	2,413 00
Premiums paid, 1909.....	2,361 00
Paid superintendent, judges, etc.....	164 95
Received from pen rent, 1908.....	\$483 00
Premiums offered, 1908.....	2,310 00
Premiums paid, 1908.....	2,226 00
Paid superintendent, judges, etc.....	215 90

## BERKSHIRES.

Name of Owner.	Postoffice.	Awards.	Amount.
E. J. Barker.....	Thornton, Ind.....	Best Boar 2 Years or Over.....	\$15 00
Hupp Farms.....	Birmingham, Mich.....	2d Best.....	10 00
M. W. Simpson.....	Freeport, O. R. R. 2.....	3d Best.....	5 00
E. J. Barker.....	Thornton, Ind.....	Best Boar 18 Months and Under 24.....	15 00
E. J. Barker.....	Thornton, Ind.....	2d Best.....	10 00
Hupp Farms.....	Birmingham, Mich.....	3d Best.....	5 00
E. J. Barker.....	Thornton, Ind.....	Best Boar 12 Months and Under 18.....	10 00
John T. Myers.....	Millersburg, O.....	2d Best.....	7 00
Hupp Farms.....	Birmingham, Mich.....	3d Best.....	4 00
E. J. Barker.....	Thornton, Ind.....	Best Boar 6 Months and Under 1 Year.....	10 00
A. E. Fisher.....	Orient, O.....	2d Best.....	7 00
E. J. Barker.....	Thornton, Ind.....	3d Best.....	4 00
E. J. Barker.....	Thornton, Ind.....	Best Boar Under 6 Months.....	10 00
E. J. Barker.....	Thornton, Ind.....	2d Best.....	7 00
A. E. Fisher.....	Orient, O.....	3d Best.....	4 00
E. J. Barker.....	Thornton, Ind.....	Best Sow 2 Years or Over.....	15 00
Hupp Farms.....	Birmingham, Md.....	2d Best.....	10 00
E. J. Barker.....	Thornton, Ind.....	3d Best.....	5 00
E. J. Barker.....	Thornton, Ind.....	Best Sow 18 Months and Under 24.....	15 00
Hupp Farms.....	Birmingham, Md.....	2d Best.....	10 00
E. J. Barker.....	Thornton, Ind.....	3d Best.....	5 00
Hupp Farms.....	Birmingham, Md.....	Best Sow 12 Months and Under 18.....	10 00
E. J. Barker.....	Thornton, Ind.....	2d Best.....	7 00
Hupp Farms.....	Birmingham, Md.....	3d Best.....	4 00
E. J. Barker.....	Thornton, Ind.....	Best Sow 6 Months and Under 12.....	10 00
F. E. Kite.....	St. Paris, O.....	2d Best.....	7 00
Hupp Farms.....	Birmingham, Ind.....	3d Best.....	4 00
John F. Myers.....	Millersburg, O.....	Best Sow Under 6 Months.....	10 00
E. J. Barker.....	Thornton, Ind.....	2d Best.....	7 00
W. J. Inorp.....	Pataskala, O.....	3d Best.....	4 00
(Breeders' Rings.)			
E. J. Barker.....	Thornton, Ind.....	Best Four Swine Any Age Get of One Boar.....	20 00
E. J. Barker.....	Thornton, Ind.....	2d Best.....	10 00
Hupp Farms.....	Birmingham, Mich.....	3d Best.....	5 00
E. J. Barker.....	Thornton, Ind.....	Best Four Pigs Under 6 Months, One Litter.....	20 00
E. J. Barker.....	Thornton, Ind.....	2d Best.....	10 00
A. E. Fisher.....	Orient, O.....	3d Best.....	5 00
E. J. Barker.....	Thornton, Ind.....	Best Exhibitor's Herd.....	20 00
Hupp Farms.....	Birmingham, Mich.....	2d Best.....	12 00
E. J. Barker.....	Thornton, Ind.....	3d Best.....	7 00
E. J. Barker.....	Thornton, Ind.....	Best Breeder's Young Herd.....	20 00
A. E. Fisher.....	Orient, O.....	2d Best.....	12 00
E. J. Barker.....	Thornton, Ind.....	3d Best.....	7 00
(Champions.)			
E. J. Barker.....	Thornton, Ind.....	Senior Boar 1 Year and Over.....	10 00
E. J. Barker.....	Thornton, Ind.....	Junior Boar Under 1 Year.....	10 00
E. J. Barker.....	Thornton, Ind.....	Senior Sow 1 Year and Over.....	10 00
John T. Myers.....	Millersburg, O.....	Junior Sow Under 1 Year.....	10 00
(Grand Champions.)			
E. J. Barker.....	Thornton, Ind.....	Boar Any Age.....	10 00
E. J. Barker.....	Thornton, Ind.....	Sow Any Age.....	10 00

## POLAND CHINAS.

Name of Owner.	Postoffice.	Awards.	Amount.
Gilbert Cox.....	Camden, O.....	Best Boar 2 Years or Over.....	\$15 00
E. W. Keller.....	Tiffin, O.....	2d Best.....	10 00
Niles & Goslie.....	Herrod, O., & Ken- ton, O.....	3d Best.....	5 00
F. C. Osburn.....	Newark, O.....	Best Boar 18 Months and Under 24.....	15 00
L. R. Hatcher & E. W. Foster.....	Rushsylvania, O.....	2d Best.....	10 00
C. M. & F. A. Beatty Chas. E. Keller & J. W. Garney.....	Orient, O.....	3d Best.....	5 00
F. M. Hays.....	Newark, O.....	Best Boar 12 Months and Under 18.....	10 00
Thos. Hunter & Co.	Piketon, O.....	2d Best.....	7 00
J. W. Townsley.....	Morrow, O.....	3d Best.....	4 00
Ed. Klever & John Doyel.....	Washington C. H., O.	Best Boar 6 Months and Under 1 Year.....	10 00
Ed. Klever & John Doyel.....	Bloomington, O.....	2d Best.....	7 00
J. W. Townsley.....	Bloomington, O.....	3d Best.....	4 00
M. C. Brown & Son.	Washington C. H., O.	Best Boar Under 6 Months.....	10 00
Ed. Klever & John Doyel.....	Martinsville, O.....	2d Best.....	7 00
G. A. Black.....	Bloomington, O.....	3d Best.....	4 00
J. A. Stalter.....	Quincy, O.....	Best Sow 2 Years or Over.....	15 00
Henry Wisely.....	Pataskala, O.....	2d Best.....	10 00
L. R. Hatcher & E. W. Foster.....	Grover Hill, O.....	3d Best.....	5 00
Henry Wisely.....	Rushsylvania, O.....	Best Sow 18 Months and Under 24.....	15 00
F. C. Osburn.....	Grover Hill, O.....	2d Best.....	10 00
W. C. Welch.....	Newark, O.....	3d Best.....	5 00
Ed. Klever & John Doyel.....	Harveysburg, O.....	Best Sow 12 Months and Under 18.....	10 00
Spurling Bros.....	Bloomington, O.....	2d Best.....	7 00
Ed. Klever & John Doyel.....	Pleasant Plain, O.....	3d Best.....	4 00
Ed. Klever & John Doyel.....	Bloomington, O.....	Best Sow 6 Months and Under 12.....	10 00
F. C. Osburn.....	Bloomington, O.....	2d Best.....	7 00
Ed. Klever & John Doyel.....	Newark, O.....	3d Best.....	4 00
Ed. Klever & John Doyel.....	Bloomington, O.....	Best Sow Under 6 Months.....	10 00
M. C. Brown & Son	Bloomington, O.....	2d Best.....	7 00
	Martinsville, O.....	3d Best.....	4 00
(Breeders' Rings.)			
Ed. Klever & John Doyel.....	Bloomington, O.....	Best Four Swine Any Age, Get of 1 Boar.....	20 00
Ed. Klever & John Doyel.....	Bloomington, O.....	2d Best.....	10 00
J. W. Townsley.....	Washington C. H., O.	3d Best.....	5 00
Ed. Klever & John Doyel.....	Bloomington, O.....	Best Four Pigs Under 6 Months, One Litter.....	20 00
M. C. Brown & Son.	Martinsville, O.....	2d Best.....	10 00
Ed. Klever & John Doyel.....	Bloomington, O.....	3d Best.....	5 00
Spurling Bros.....	Pleasant Plain, O.....	Best Exhibitor's Herd.....	20 00
C. M. & F. A. Beatty G. A. Black.....	Orient, O.....	2d Best.....	12 00
Ed. Klever and John Doyel.....	Quincy, O.....	3d Best.....	7 00
M. C. Brown & Son	Bloomington, O.....	Best Breeder's Young Herd.....	20 00
Ed. Klever & John Doyel.....	Martinsville, O.....	2d Best.....	12 00
	Bloomington, O.....	3d Best.....	7 00
(Champions.)			
Chas. E. Keller & J. W. Garvey.....	Newark, O.....	Senior Boar 1 Year and Over.....	10 00
J. W. Townsley.....	Washington C. H., O.	Junior Boar Under 1 Year.....	10 00
W. C. Welch.....	Harveysburg, O.....	Senior Sow 1 Year and Over.....	10 00
Ed. Klever & John Doyel.....	Bloomington, O.....	Junior Sow Under 1 Year.....	10 00
(Grand Champions.)			
Chas. E. Keller & J. W. Garvey.....	Newark, O.....	Boar Any Age.....	10 00
Ed. Klever & John Doyel.....	Bloomington, O.....	Sow Any Age.....	10 00

## CHESTER WHITES.

Name of Owner.	Postoffice.	Awards.	Amount.
J. W. L. Motherspaw & Son.....	Newark, O.....	Best Boar 2 Years or Over.....	\$15 00
W. J. Cherry.....	Xenia, O.....	2d Best.....	10 00
C. Hintz & Son.....	Fremont, O.....	3d Best.....	5 00
W. T. Dever.....	Lucasville, O.....	Best Boar 18 Months and Under 24.....	15 00
F. P. & J. J. Hardin	Lima, O.....	2d Best.....	10 00
W. G. Fawcett & Son	Chesterhill, O.....	3d Best.....	5 00
F. P. & J. J. Hardin	Lima, O.....	Best Boar 12 Months and Under 18.....	10 00
F. P. & J. J. Hardin	Lima, O.....	2d Best.....	7 00
C. Hintz & Son.....	Fremont, O.....	3d Best.....	4 00
F. P. & J. J. Hardin	Lima, O.....	Best Boar 6 Months and Under 1 Year.....	10 00
W. T. Dever.....	Lucasville, O.....	2d Best.....	7 00
C. Hintz & Son.....	Fremont, O.....	3d Best.....	4 00
F. P. & J. J. Hardin	Lima, O.....	Best Boar Under 6 Months.....	10 00
F. P. & J. J. Hardin	Lima, O.....	2d Best.....	7 00
F. P. & J. J. Hardin	Lima, O.....	3d Best.....	4 00
J. W. L. Motherspaw & Son.....	Newark, O.....	Best Sow 2 Years or Over.....	15 00
J. W. L. Motherspaw & Son.....	Newark, O.....	2d Best.....	10 00
W. T. Dever.....	Lucasville, O.....	3d Best.....	5 00
W. T. Dever.....	Lucasville, O.....	Best Sow 18 Months and Under 24.....	15 00
W. T. Dever.....	Lucasville, O.....	2d Best.....	10 00
W. G. Fawcett & Son	Chesterhill, O.....	3d Best.....	5 00
W. T. Dever.....	Lucasville, O.....	Best Sow 12 Months and Under 18.....	10 00
J. W. L. Motherspaw & Son.....	Newark, O.....	2d Best.....	7 00
Chas. Winger.....	Clayton, O.....	3d Best.....	4 00
F. P. & J. J. Hardin.	Lima, O.....	Best Sow 6 Months and Under 12.....	10 00
F. P. & J. J. Hardin.	Lima, O.....	2d Best.....	7 00
F. P. & J. J. Hardin.	Lima, O.....	3d Best.....	4 00
J. W. L. Motherspaw & Son.....	Newark, O.....	Best Sow Under 6 Months.....	10 00
J. W. L. Motherspaw & Son.....	Newark, O.....	2d Best.....	7 00
J. W. L. Motherspaw & Son.....	Newark, O.....	3d Best.....	4 00
(Breeders' Rings.)			
W. T. Dever.....	Lucasville, O.....	Best Four Swine Any Age, Get of 1 Boar.....	20 00
F. P. & J. J. Hardin	Lima, O.....	2d Best.....	10 00
F. P. & J. J. Hardin	Lima, O.....	3d Best.....	5 00
F. P. & J. J. Hardin	Lima, O.....	Best Four Pigs Under 6 Months, One Litter.....	20 00
J. W. L. Motherspaw & Son.....	Newark, O.....	2d Best.....	10 00
F. P. & J. J. Hardin.	Lima, O.....	3d Best.....	5 00
W. T. Dever.....	Lucasville, O.....	Best Exhibitor's Herd.....	20 00
J. W. L. Motherspaw & Son.....	Newark, O.....	2d Best.....	12 00
W. T. Dever.....	Lucasville, O.....	3d Best.....	7 00
F. P. & J. J. Hardin	Lima, O.....	Best Breeder's Young Herd.....	20 00
C. Hintz & Son.....	Fremont, O.....	2d Best.....	12 00
W. T. Dever.....	Lucasville, O.....	3d Best.....	7 00
(Champions.)			
W. T. Dever.....	Lucasville, O.....	Senior Boar 1 Year and Over.....	10 00
F. P. & J. J. Hardin	Lima, O.....	Junior Boar Under 1 Year.....	10 00
J. W. L. Motherspaw & Son.....	Newark, O.....	Senior Sow 1 Year and Over.....	10 00
F. P. & J. J. Hardin	Lima, O.....	Junior Sow Under 1 Year.....	10 00
(Grand Champions.)			
W. T. Dever.....	Lucasville, O.....	Boar Any Age.....	10 00
J. W. L. Motherspaw & Son.....	Newark, O.....	Sow Any Age.....	10 00

## DUROC JERSEYS.

Name of Owner.	Postoffice.	Awards.	Amount.
W. B. Cline & Fields	Camden, O.....	Best Boar 2 Years or Over.....	\$15 00
Watt & Foust.....	Cedarville, O.....	2d Best.....	10 00
Mahan Bros.....	Osborn, O.....	3d Best.....	5 00

AWARDS.

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DUROC JERSEYS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
W. B. Cline & Fields	Camden, O.	Best Boar 18 Months and Under 24.	\$15 00
E. C. Stemen & Son.	Middleport, O.	2d Best.	10 00
Mahan Bros.	Osborn, O.	3d Best.	5 00
Watt & Foust.	Cedarville, O.	Best Boar 12 Months and Under 18.	10 00
D. W. Brown & Son	Union City, Ind.	2d Best.	7 00
W. P. Baker.	Wilmington, O.	3d Best.	4 00
Watt & Foust.	Cedarville, O.	Best Boar 6 Months and Under 1 Year.	10 00
Mahan Bros.	Osborn, O.	2d Best.	7 00
Bardwell & Barnard	McHenry, Ky.	3d Best.	4 00
W. P. Baker.	Wilmington, O.	Best Boar Under 6 Months.	10 00
Mahan Bros.	Osborn, O.	2d Best.	7 00
Watt & Foust.	Cedarville, O.	3d Best.	4 00
Mahan Bros.	Osborn, O.	Best Sow 2 Years or Over.	15 00
Mahan Bros.	Osborn, O.	2d Best.	10 00
E. C. Stemen & Son.	Middleport, O.	3d Best.	5 00
Mahan Bros.	Osborn, O.	Best Sow 18 Months and Under 24.	15 00
Watt & Foust.	Cedarville, O.	2d Best.	10 00
E. C. Stemen.	Middleport, O.	3d Best.	5 00
Watt & Foust.	Cedarville, O.	Best Sow 12 Months and Under 18.	10 00
Mahan Bros.	Osborn, O.	2d Best.	7 00
Mahan Bros.	Osborn, O.	3d Best.	4 00
Bardwell & Barnard	McHenry, Ky.	Best Sow 6 Months and Under 12.	10 00
Mahan Bros.	Osborn, O.	2d Best.	7 00
Watt & Foust.	Cedarville, O.	3d Best.	4 00
Bardwell & Barnard	McHenry, Ky.	Best Sow Under 6 Months.	10 00
Watt & Foust.	Cedarville, O.	2d Best.	7 00
W. P. Baker.	Wilmington, O.	3d Best.	4 00
(Breeders' Rings.)			
Watt & Foust.	Cedarville, O.	Best Four Swine Any Age, Get of 1 Boar.	20 00
Mahan Bros.	Osborn, O.	2d Best.	10 00
Watt & Foust.	Cedarville, O.	3d Best.	5 00
W. P. Baker.	Wilmington, O.	Best Four Pigs Under 6 Months, One Litter.	20 00
Bardwell & Barnard	McHenry, Ky.	2d Best.	10 00
Watt & Foust.	Cedarville, O.	3d Best.	5 00
Mahan Bros.	Osborn, O.	Best Exhibitor's Herd.	20 00
Watt & Foust.	Cedarville, O.	2d Best.	12 00
Bardwell & Barnard	McHenry, Ky.	3d Best.	7 00
Watt & Foust.	Cedarville, O.	Best Breeder's Young Herd.	20 00
Mahan Bros.	Osborn, O.	2d Best.	10 00
W. P. Baker.	Wilmington, O.	3d Best.	7 00
(Champions.)			
W. B. Cline & Fields	Camden, O.	Senior Boar 1 Year and Over.	10 00
Watt & Foust.	Cedarville, O.	Junior Boar Under 1 Year.	10 00
Mahan Bros.	Osborn, O.	Senior Sow 1 Year and Over.	10 00
Bardwell & Barnard	McHenry, Ky.	Junior Sow Under 1 Year.	10 00
(Grand Champions.)			
W. B. Cline & Fields	Camden, O.	Boar Any Age.	10 00
Mahan Bros.	Osborn, O.	Sow Any Age.	10 00

YORKSHIRES.

Name of Owner.	Postoffice.	Awards.	Amount.
The Wheeler Home- stead	Kanova, N. Y.	Best Boar 2 Years or Over.	\$10 00
The Wheeler Home- stead	Kanova, N. Y.	2d Best.	5 00
The Wheeler Home- stead	Kanova, N. Y.	Best Boar 18 Months and Under 24.	10 00
W. H. Miner.	Chazy, N. Y.	2d Best.	5 00
F. E. Kite.	St. Paris, O.	Best Boar 12 Months and Under 18.	7 00
W. H. Miner.	Chazy, N. Y.	2d Best.	4 00
W. H. Miner.	Chazy, N. Y.	Best Boar Under 12 Months and Over 6.	7 00
F. E. Kite.	St. Paris, O.	2d Best.	4 00
W. H. Miner.	Chazy, N. Y.	Best Boar Under 6 Months.	5 00
The Wheeler Home- stead	Kanova, N. Y.	2d Best.	3 00
W. H. Miner.	Chazy, N. Y.	Best Sow 2 Years or Over.	10 00
The Wheeler Home- stead	Kanova, N. Y.	2d Best.	5 00

## YORKSHIRES—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
W. H. Miner.....	Chazy, N. Y.....	Best Sow 18 Months and Under 24.....	\$7 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	4 00
The Wheeler Home- stead .....	Kanova, N. Y.....	Best Sow 12 Months and Under 18.....	7 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	4 00
The Wheeler Home- stead .....	Kanova, N. Y.....	Best Sow Under 12 Months and Over 6.....	7 00
The Wheeler Home- stead .....	Kanova, N. Y.....	2d Best.....	4 00
F. E. Kite.....	St. Paris, O.....	Best Sow Under 6 Months.....	5 00
F. E. Kite.....	St. Paris, O.....	2d Best.....	3 00
(Breeders' Rings.)			
W. H. Miner.....	Chazy, N. Y.....	Best Four Swine Any Age, the Get of 1 Boar..	12 00
The Wheeler Home- stead .....	Kanova, N. Y.....	2d Best.....	6 00
W. H. Miner.....	Chazy, N. Y.....	Best Four Pigs Under 12 Months, One Litter...	12 00
F. E. Kite.....	St. Paris, O.....	2d Best.....	6 00
(Exhibitors' Herd.)			
W. H. Miner.....	Chazy, N. Y.....	Best Boar and Three Sows All Over 1 Year Owned by Exhibitor.....	12 00
The Wheeler Home- stead .....	Kanova, N. Y.....	2d Best.....	6 00
The Wheeler Home- stead .....	Kanova, N. Y.....	Best Boar and Three Sows All Under 1 Year Owned by Exhibitor.....	12 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	6 00

## HAMPSHIRE.

Name of Owner.	Postoffice.	Awards.	Amount.
Willie Essig.....	Tipton, Ind.....	Best Boar 2 Years or Over.....	\$10 00
Willie Essig.....	Tipton, Ind.....	Best Boar 18 Months and Under 24.....	10 00
C. S. Rice.....	Spencer, O.....	Best Boar 12 Months and Under 18.....	7 00
Willie Essig.....	Tipton, Ind.....	Best Boar Under 12 Months and Over 6.....	7 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	4 00
C. S. Rice.....	Spencer, O.....	3d Best.....	2 00
Willie Essig.....	Tipton, Ind.....	Best Boar Under 6 Months.....	5 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	3 00
C. S. Rice.....	Spencer, O.....	3d Best.....	1 00
Willie Essig.....	Tipton, Ind.....	Best Sow 2 Years or Over.....	10 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	5 00
Willie Essig.....	Tipton, Ind.....	Best Sow 18 Months and Under 24.....	7 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	4 00
Willie Essig.....	Tipton, Ind.....	3d Best.....	2 00
Willie Essig.....	Tipton, Ind.....	Best Sow Under 12 Months and Over 6.....	7 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	4 00
C. S. Rice.....	Spencer, O.....	3d Best.....	2 00
Willie Essig.....	Tipton, Ind.....	Best Sow Under 12 and Over 6.....	7 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	4 00
C. S. Rice.....	Spencer, O.....	3d Best.....	2 00
Willie Essig.....	Tipton, Ind.....	Best Sow Under 6 Months.....	5 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	3 00
C. S. Rice.....	Spencer, O.....	3d Best.....	1 00
(Breeders' Rings.)			
Willie Essig.....	Tipton, Ind.....	Best Four Swine Any Age, Get of 1 Boar.....	12 00
Willie Essig.....	Tipton, Ind.....	2d Best.....	6 00
C. S. Rice.....	Spencer, O.....	3d Best.....	3 00
Willie Essig.....	Tipton, Ind.....	Best Four Pigs Under 12 Months, One Litter...	12 00
(Exhibitors' Herd.)			
Willie Essig.....	Tipton, Ind.....	Best Boar and Three Sows, All Over 1 Year, Owned by Exhibitor.....	12 00
Willie Essig.....	Tipton, Ind.....	Best Boar and Three Sows, All Under 1 Year, Owned by Exhibitor.....	12 00



## TAMWORTHS.

Name of Owner.	Postoffice.	Awards.	Amount.
Frank Thornber....	Carthage, Ill.....	Best Boar 2 Years or Over.....	\$10 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	5 00
Chas. Ford.....	Mortonsville, Ky.....	Best Boar 18 Months and Under 24.....	10 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	5 00
Frank Thornber....	Carthage, Ill.....	Best Boar 12 Months and Under 18.....	7 00
Frank Thornber....	Carthage, Ill.....	2d Best.....	4 00
Frank Thornber....	Carthage, Ill.....	Best Boar Under 12 Months and Over 6.....	7 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	4 00
Frank Thornber....	Carthage, Ill.....	Best Boar Under 6 Months.....	5 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	3 00
Frank Thornber....	Carthage, Ill.....	Best Sow 2 Years or Over.....	10 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	5 00
Frank Thornber....	Carthage, Ill.....	Best Sow 18 Months and Under 24.....	7 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	4 00
Frank Thornber....	Carthage, Ill.....	Best Sow 12 Months and Under 18.....	7 00
Frank Thornber....	Carthage, Ill.....	2d Best.....	4 00
Chas. Ford.....	Mortonsville, Ky.....	Best Sow Under 12 Months and Over 6.....	7 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	4 00
Chas. Ford.....	Mortonsville, Ky.....	Best Sow Under 6 Months.....	5 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	3 00
(Breeders' Rings.)			
Frank Thornber....	Carthage, Ill.....	Best Four Swine Any Age, Get of 1 Boar.....	12 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	6 00
Chas. Ford.....	Mortonsville, Ky.....	Best Four Pigs Under 12 Months, One Litter...	12 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	6 00
(Exhibitors' Herd.)			
Frank Thornber....	Carthage, Ill.....	Best Boar and Three Sows, All Over 1 Year, Owned by Exhibitor.....	12 00
Frank Thornber....	Carthage, Ill.....	2d Best.....	6 00
Chas. Ford.....	Mortonsville, Ky.....	Best Boar and Three Sows, All Under 1 Year, Owned by Exhibitor.....	12 00
Chas. Ford.....	Mortonsville, Ky.....	2d Best.....	6 00

## FOURTH DEPARTMENT—SHEEP

G. E. JOBE, Member in Charge.

C. M. AUSTIN.....Superintendent  
H. R. TINGLEY.....Clerk

W. M. STALEY.

JUDGES.

R. J. STONE.

Received from pen rent 1909.....\$555 00  
Premiums offered 1909.....3,437 00  
Premiums paid 1909.....3,173 00  
Paid superintendent, judges, etc., 1909.....215 10

Received from pen rent 1908.....\$455 00  
Premiums offered 1908.....3,116 00  
Premiums paid 1908.....3,050 00  
Paid superintendent, judges, etc., 1908.....149 55

## MERINOS—CLASS A.

Name of Owner.	Postoffice.	Awards.	Amount.
D. K. Bell.....	Rochester, N. Y., R. 6	Best Ram 2 Years or Over.....	\$10 00
E. N. Bissell.....	East Shoreham, Vt..	2d Best.....	8 00
J. Lovett & Sons.....	Quincy, O.....	3d Best.....	6 00
S. Blamer & Son.....	Johnstown, O.....	4th Best.....	4 00
E. N. Bissell.....	East Shoreham, Vt..	5th Best.....	2 00
E. N. Bissell.....	East Shoreham, Vt..	Best Ram 1 Year and Under 2..	10 00
D. K. Bell.....	Rochester, N. Y., R. 6	2d Best.....	8 00
Queen & Fawcett.....	Chesterhill, O.....	3d Best.....	6 00
R. D. Williamson.....	Xenia, O.....	4th Best.....	4 00
D. K. Bell.....	Rochester, N. Y., R. 6	5th Best.....	2 00
S. Blamer & Son.....	Johnstown, O.....	Best Ram Under 1 Year.....	8 00
D. K. Bell.....	Rochester, N. Y., R. 6	2d Best.....	6 00
D. K. Bell.....	Rochester, N. Y., R. 6	3d Best.....	4 00
A. H. Dean & Son.....	West Mansfield, O..	4th Best.....	3 00
R. D. Williamson.....	Xenia, O.....	5th Best.....	2 00
D. K. Bell.....	Rochester, N. Y., R. 6	Best Ewe 2 Years or Over.....	10 00
S. Blamer & Son.....	Johnstown, O.....	2d Best.....	8 00
D. K. Bell.....	Rochester, N. Y., R. 6	3d Best.....	6 00
Clarence W. Barker.....	Rochester, N. Y., R. 6	4th Best.....	4 00
E. M. Moore.....	Wixom, Mich.....	5th Best.....	2 00
Clarence W. Barker.....	Rochester, N. Y., R. 6	Best Ewe 1 Year and Under 2..	10 00
D. K. Bell.....	Rochester, N. Y., R. 6	2d Best.....	8 00
Clarence W. Barker.....	Rochester, N. Y., R. 6	3d Best.....	6 00
D. K. Bell.....	Rochester, N. Y., R. 6	4th Best.....	4 00
J. J. Deeds & Son.....	Pataskala, O.....	5th Best.....	2 00
Clarence W. Barker.....	Rochester, N. Y., R. 6	Best Ewe Under 1 Year.....	8 00
R. D. Williamson.....	Xenia, O.....	2d Best.....	6 00
D. K. Bell.....	Rochester, N. Y., R. 6	3d Best.....	4 00
E. M. Moore.....	Wixom, Mich.....	4th Best.....	3 00
Williamson & Rob- bins.....	Xenia, O.....	5th Best.....	2 00
D. K. Bell.....	Rochester, N. Y., R. 6	Best Exhibitors' Flock.....	10 00
Clarence W. Barker.....	Rochester, N. Y., R. 6	2d Best.....	8 00
J. Lovett & Son.....	Quincy, O.....	3d Best.....	6 00
D. K. Bell.....	Rochester, N. Y., R. 6	4th Best.....	4 00
S. Blamer & Son.....	Johnstown, O.....	5th Best.....	2 00
D. K. Bell.....	Rochester, N. Y., R. 6	Best Breeders' Young Flock....	10 00
R. D. Williamson.....	Xenia, O.....	2d Best.....	8 00
J. J. Deeds & Son.....	Pataskala, O.....	3d Best.....	6 00
E. M. Moore.....	Wixom, Mich.....	4th Best.....	4 00
D. K. Bell.....	Rochester, N. Y., R. 6	Best Get of Sire.....	10 00
S. Blamer & Son.....	Johnstown, O.....	2d Best.....	8 00
D. K. Bell.....	Rochester, N. Y., R. 6	3d Best.....	6 00
R. D. Williamson.....	Xenia, O.....	4th Best.....	4 00
C. H. Bell.....	Ashley, O.....	5th Best.....	2 00
D. K. Bell.....	Rochester, N. Y., R. 6	Champion Ram, Any Age.....	10 00
D. K. Bell.....	Rochester, N. Y., R. 6	Champion Ewe, Any Age.....	10 00

## MERINOS—CLASS B.

Name of Owner.	Postoffice.	Awards.	Amount.
R. D. Williamson	Xenia, O.	Best Ram 2 Years or Over	\$10 00
S. Blamer & Son	Johnstown, O.	2d Best	8 00
A. T. Gamber	Wakeman, O.	3d Best	6 00
Queen & Fawcett	Chesterhill, O.	4th Best	4 00
A. H. Dean & Son	West Mansfield, O.	5th Best	2 00
A. T. Gamber	Wakeman, O.	Best Ram 1 Year and Under 2	10 00
D. K. Bell	Rochester, N. Y., R. 6	2d Best	8 00
S. Blamer & Son	Johnstown, O.	3d Best	6 00
R. D. Williamson	Xenia, O.	4th Best	4 00
J. Lovett & Sons	Quincy, O.	5th Best	2 00
S. Blamer & Sons	Johnstown, O.	Best Ram Under 1 Year	8 00
A. H. Dean & Son	West Mansfield, O.	2d Best	6 00
A. T. Gamber	Wakeman, O.	3d Best	4 00
R. D. Williamson	Xenia, O.	4th Best	3 00
W. N. Cook & Son	New London, O.	5th Best	2 00
J. W. Robertson	Cadiz, O., R. D. 2	Best Ewe 2 Years or Over	10 00
A. T. Gamber	Wakeman, O.	2d Best	8 00
W. E. Wilson	Marengo, O.	3d Best	6 00
S. Blamer & Son	Johnstown, O.	4th Best	4 00
A. T. Gamber	Wakeman, O.	5th Best	2 00
A. T. Gamber	Wakeman, O.	Best Ewe 1 Year and Under 2	10 00
A. H. Dean & Son	West Mansfield, O.	2d Best	8 00
S. Blamer & Son	Johnstown, O.	3d Best	6 00
W. N. Cook & Son	New London, O.	4th Best	4 00
A. T. Gamber	Wakeman, O.	5th Best	2 00
S. Blamer & Son	Johnstown, O.	Best Ewe Under 1 Year	8 00
A. T. Gamber	Wakeman, O.	2d Best	6 00
A. T. Gamber	Wakeman, O.	3d Best	4 00
A. H. Dean & Son	West Mansfield, O.	4th Best	3 00
R. D. Williamson	Xenia, O.	5th Best	2 00
A. T. Gamber	Wakeman, O.	Best Exhibitors' Flock	10 00
S. Blamer & Son	Johnstown, O.	2d Best	8 00
R. D. Williamson	Xenia, O.	3d Best	6 00
A. H. Dean & Son	West Mansfield, O.	4th Best	4 00
J. W. Robertson	Cadiz, O., R. D. 2	5th Best	2 00
A. T. Gamber	Wakeman, O.	Best Breeders' Young Flock	10 00
R. D. Williamson	Xenia, O.	2d Best	8 00
C. H. Bell	Ashley, O.	3d Best	6 00
D. K. Bell	Rochester, N. Y., R. 6	4th Best	4 00
Queen & Fawcett	Chesterhill, O.	5th Best	2 00
A. T. Gamber	Wakeman, O.	Best Get of Sire	10 00
A. H. Dean & Son	West Mansfield, O.	2d Best	8 00
R. D. Williamson	Xenia, O.	3d Best	6 00
W. N. Cook & Son	New London, O.	4th Best	4 00
Williamson & Robbins	Xenia, O.	5th Best	2 00
A. T. Gamber	Wakeman, O.	Champion Ram, Any Age	10 00
J. W. Robertson	Cadiz, O.	Champion Ewe, Any Age	10 00

## MERINOS—CLASS C.

Name of Owner.	Postoffice.	Awards.	Amount.
S. Blamer & Son	Johnstown, O.	Best Ram 2 Years or Over	\$10 00
W. N. Cook & Son	New London, O.	2d Best	8 00
J. M. Wilson	Fredericktown, O.	3d Best	6 00
A. T. Gamber	Wakeman, O.	4th Best	4 00
J. W. Robertson	Cadiz, O., R. D. 2	5th Best	2 00
W. N. Cook & Son	New London, O.	Best Ram 1 Year and Under 2	10 00
A. T. Gamber	Wakeman, O.	2d Best	8 00
R. D. Williamson	Xenia, O.	3d Best	6 00
A. T. Gamber	Wakeman, O.	4th Best	4 00
S. Blamer & Son	Johnstown, O.	5th Best	2 00
S. Blamer & Son	Johnstown, O.	Best Ram Under 1 Year	8 00
A. T. Gamber	Wakeman, O.	2d Best	6 00
J. M. Wilson	Fredericktown, O.	3d Best	4 00
W. N. Cook & Son	New London, O.	4th Best	3 00
J. Lovett & Son	Quincy, O.	5th Best	2 00
W. E. Wilson	Marengo, O.	Best Ewe 2 Years or Over	10 00
A. T. Gamber	Wakeman, O.	2d Best	8 00
S. Blamer & Son	Johnstown, O.	3d Best	6 00
R. D. Williamson	Xenia, O.	4th Best	4 00
J. M. Wilson	Fredericktown, O.	5th Best	2 00
S. Blamer & Son	Johnstown, O.	Best Ewe 1 Year and Under 2	10 00
J. W. Robertson	Cadiz, O., R. D. 2	2d Best	8 00
A. T. Gamber	Wakeman, O.	3d Best	6 00
W. N. Cook & Son	New London, O.	4th Best	4 00
R. D. Williamson	Xenia, O.	5th Best	2 00

## MERINOS—CLASS C—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
W. N. Cook & Son..	New London, O.....	Best Ewe Under 1 Year.....	\$8 00
A. T. Gamber.....	Wakeman, O.....	2d Best.....	6 00
R. D. Williamson....	Xenia, O.....	3d Best.....	4 00
F. H. Russell.....	Wakeman, O.....	4th Best.....	3 00
S. Blamer & Son....	Johnstown, O.....	5th Best.....	2 00
S. Blamer & Son....	Johnstown, O.....	Best Exhibitors' Flock.....	10 00
W. N. Cook & Son..	New London, O.....	2d Best.....	8 00
A. T. Gamber.....	Wakeman, O.....	3d Best.....	6 00
J. M. Wilson.....	Fredericktown, O.....	4th Best.....	4 00
R. D. Williamson....	Xenia, O.....	5th Best.....	2 00
W. N. Cook & Son..	New London, O.....	Best Breeders' Young Flock....	10 00
A. T. Gamber.....	Wakeman, O.....	2d Best.....	8 00
R. D. Williamson....	Xenia, O.....	3d Best.....	6 00
F. H. Russell.....	Wakeman, O.....	4th Best.....	4 00
C. H. Bell.....	Ashley, O.....	5th Best.....	2 00
A. T. Gamber.....	Wakeman, O.....	Best Get of Sire.....	10 00
W. N. Cook & Son..	New London, O.....	2d Best.....	8 00
J. M. Wilson.....	Fredericktown, O.....	3d Best.....	6 00
S. Blamer & Son....	Johnstown, O.....	4th Best.....	4 00
F. H. Russell.....	Wakeman, O.....	5th Best.....	2 00
S. Blamer & Son....	Johnstown, O.....	Champion Ram, Any Age.....	10 00
W. E. Wilson.....	Marengo, O.....	Champion Ewe, Any Age.....	10 00

## FRENCH MERINOS—RAMBOULLET.

Name of Owner.	Postoffice.	Awards.	Amount.
L. W. Shaw.....	Pottersburg, O.....	Best Ram 2 Years or Over.....	\$10 00
J. F. Highslip.....	Kenton, O.....	2d Best.....	8 00
E. M. Moore.....	Wixom, Mich.....	3d Best.....	6 00
L. W. Shaw.....	Pottersburg, O.....	4th Best.....	4 00
J. H. McMullan.....	Woodstock, O.....	5th Best.....	2 00
E. M. Moore.....	Wixom, Mich.....	Best Ram 1 Year and Under 2..	10 00
L. W. Shaw.....	Pottersburg, O.....	2d Best.....	8 00
J. M. Shaw & Son..	Edison, O.....	3d Best.....	6 00
J. H. McMullan.....	Woodstock, O.....	4th Best.....	4 00
E. M. Moore.....	Wixom, Mich.....	5th Best.....	2 00
Lincoln Bros.....	Millford Center, O.....	Best Ram Under 1 Year.....	8 00
Lincoln Bros.....	Millford Center, O.....	2d Best.....	6 00
W. L. White.....	Johnstown, O.....	3d Best.....	4 00
Orth and Mathews..	McGuffey, O.....	4th Best.....	3 00
L. W. Shaw.....	Pottersburg, O.....	5th Best.....	2 00
E. M. Moore.....	Wixom, Mich.....	Best Ewe 2 Years or Over.....	10 00
L. W. Shaw.....	Pottersburg, O.....	2d Best.....	8 00
J. H. McMullan.....	Woodstock, O.....	3d Best.....	6 00
Lincoln Bros.....	Millford Center, O.....	4th Best.....	4 00
Orth and Mathews..	McGuffey, O.....	5th Best.....	2 00
E. M. Moore.....	Wixom, Mich.....	Best Ewe 1 Year and Under 2..	10 00
L. W. Shaw.....	Pottersburg, O.....	2d Best.....	8 00
Lincoln Bros.....	Millford Center, O.....	3d Best.....	6 00
E. M. Moore.....	Wixom, Mich.....	4th Best.....	4 00
L. W. Shaw.....	Pottersburg, O.....	5th Best.....	2 00
Lincoln Bros.....	Millford Center, O.....	Best Ewe Under 1 Year.....	8 00
L. W. Shaw.....	Pottersburg, O.....	2d Best.....	6 00
E. M. Moore.....	Wixom, Mich.....	3d Best.....	4 00
J. H. McMullan.....	Woodstock, O.....	4th Best.....	3 00
J. K. Scott.....	Murfreesboro, Tenn.	5th Best.....	2 00
E. M. Moore.....	Wixom, Mich.....	Best Exhibitors' Flock.....	10 00
L. W. Shaw.....	Pottersburg, O.....	2d Best.....	8 00
Lincoln Bros.....	Millford Center, O.....	3d Best.....	6 00
J. H. McMullan.....	Woodstock, O.....	4th Best.....	4 00
John K. Scott.....	Murfreesboro, Tenn.	5th Best.....	2 00
E. M. Moore.....	Wixom, Mich.....	Best Breeders' Young Flock....	10 00
L. W. Shaw.....	Pottersburg, O.....	2d Best.....	8 00
Lincoln Bros.....	Millford Center, O.....	3d Best.....	6 00
J. H. McMullan.....	Woodstock, O.....	4th Best.....	4 00
Orth & Mathews..	McGuffey, O.....	5th Best.....	2 00
J. H. McMullan.....	Woodstock, O.....	Best Get of Sire.....	10 00
W. L. White.....	Johnstown, O.....	2d Best.....	8 00
J. M. Shaw & Son..	Edison, O.....	3d Best.....	6 00
L. W. Shaw.....	Pottersburg, O.....	Champion Ram, Any Age.....	10 00
E. M. Moore.....	Wixom, Mich.....	Champion Ewe, Any Age.....	10 00

## AWARDS.

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## COTSWOLDS.

Name of Owner.	Postoffice.	Awards.	Amount.
Daniel Bryan.....	Portland, Ind.....	Best Ram 2 Years or Over.....	\$10 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	8 00
Nash Bros.....	Tipton, Ind.....	3d Best.....	6 00
Daniel Bryan.....	Portland, Ind.....	Best Ram 1 Year and Under 2..	10 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	8 00
Daniel Bryan.....	Portland, Ind.....	Best Ram Under 1 Year.....	8 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	6 00
Daniel Bryan.....	Portland, Ind.....	Best Ewe 2 Years or Over.....	10 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	8 00
Daniel Bryan.....	Portland, Ind.....	Best Ewe 1 Year and Under 2..	10 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	8 00
Daniel Bryan.....	Portland, Ind.....	Best Ewe Under 1 Year.....	8 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	6 00
Daniel Bryan.....	Portland, Ind.....	Best Exhibitors' Flock.....	10 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	8 00
Daniel Bryan.....	Portland, Ind.....	Best Breeders' Young Flock.....	10 00
Daniel Bryan.....	Portland, Ind.....	2d Best.....	8 00
Daniel Bryan.....	Portland, Ind.....	Best Get of Sire.....	10 00
Daniel Bryan.....	Portland, Ind.....	Champion Ram, Any Age.....	10 00
Daniel Bryan.....	Portland, Ind.....	Champion Ewe, Any Age.....	10 00

## OXFORD DOWNS.

Name of Owner.	Postoffice.	Awards.	Amount.
Cooper & Nephews..	Chicago, Ill.....	Best Ram 2 Years or Over.....	\$10 00
J. C. Williamson & Sons.....	Xenia, O.....	2d Best.....	8 00
Geo. W. Heskett, Jr.	Fulton, O.....	3d Best.....	6 00
Geo. W. Heskett, Jr.	Fulton, O.....	4th Best.....	4 00
Cooper & Nephews	Chicago, Ill.....	Best Ram 1 Year and Under 2..	10 00
J. C. Williamson & Sons.....	Xenia, O.....	2d Best.....	8 00
J. C. Williamson & Sons.....	Xenia, O.....	3d Best.....	6 00
Geo. W. Heskett, Jr.	Fulton, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ram Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
Geo. W. Heskett, Jr.	Fulton, O.....	3d Best.....	4 00
J. C. Williamson & Sons.....	Xenia, O.....	4th Best.....	3 00
J. C. Williamson & Sons.....	Xenia, O.....	Best Ewe 2 Years or Over.....	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
Geo. W. Heskett, Jr.	Fulton, O.....	3d Best.....	6 00
J. C. Williamson & Sons.....	Xenia, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ewe 1 Year and Under 2..	10 00
J. C. Williamson & Sons.....	Xenia, O.....	2d Best.....	8 00
J. C. Williamson & Sons.....	Xenia, O.....	3d Best.....	6 00
Cooper & Nephews..	Chicago, Ill.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ewe Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
Geo. W. Heskett, Jr.	Fulton, O.....	3d Best.....	4 00
J. C. Williamson & Sons.....	Xenia, O.....	4th Best.....	3 00
Cooper & Nephews..	Chicago, Ill.....	Best Exhibitors' Flock.....	10 00
J. C. Williamson & Sons.....	Xenia, O.....	2d Best.....	8 00
J. C. Williamson & Sons.....	Xenia, O.....	3d Best.....	6 00
Geo. W. Heskett, Jr.	Fulton, O.....	4th Best.....	4 00
J. C. Williamson & Sons.....	Xenia, O.....	Best Breeders' Young Flock...	10 00
W. A. Rose.....	Norwalk, O.....	2d Best.....	8 00
J. C. Williamson & Sons.....	Xenia, O.....	3d Best.....	6 00
Cooper & Nephews..	Chicago, Ill.....	Best Get of Sire.....	10 00
J. C. Williamson & Sons.....	Xenia, O.....	2d Best.....	8 00
W. A. Rose.....	Norwalk, O.....	3d Best.....	6 00
J. C. Williamson & Sons.....	Xenia, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Champion Ram, Any Age.....	10 00
Cooper & Nephews..	Chicago, Ill.....	Champion Ewe, Any Age.....	10 00

## SHROPSHIRE DOWNS.

Name of Owner.	Postoffice.	Awards.	Amount.
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Ram 2 Years or Over.....	\$10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	3d Best.....	6 00
Cooper & Nephews..	Chicago, Ill.....	4th Best.....	4 00
J. D. Kelter.....	Xenia O.....	5th Best.....	2 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Ram 1 Year and Under 2	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
Erdenheim Farm....	Pontiac, Mich., R. 3.	3d Best.....	6 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	5th Best.....	2 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Ram Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	3d Best.....	4 00
Erdenheim Farm....	Pontiac, Mich., R. 3.	4th Best.....	3 00
Cooper & Nephews..	Chicago, Ill.....	5th Best.....	2 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Ewe 2 Years or Over.....	10 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	2d Best.....	8 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	6 00
Erdenheim Farm....	Pontiac, Mich.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	5th Best.....	2 00
Cooper & Nephews..	Chicago, Ill.....	Best Ewe 1 Year and Under 2..	10 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	2d Best.....	8 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	3d Best.....	6 00
W. F. Palmer & Son	Pataskala, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	5th Best.....	2 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Ewe Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	3d Best.....	4 00
Erdenheim Farm....	Pontiac, Mich.....	4th Best.....	3 00
Cooper & Nephews..	Chicago, Ill.....	5th Best.....	2 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Exhibitors' Flock.....	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	3d Best.....	6 00
Erdenheim Farm....	Pontiac, Mich.....	4th Best.....	4 00
W. F. Palmer & Son	Pataskala, O.....	5th Best.....	2 00
Cooper & Nephews..	Chicago, Ill.....	Best Breeders' Young Flock....	10 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	2d Best.....	8 00
Geo. E. Stallsmith..	Urbana, O.....	3d Best.....	6 00
R. E. Taylor.....	Sidney O.....	4th Best.....	4 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Best Get of Sire.....	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	3d Best.....	6 00
Erdenheim Farm....	Pontiac, Mich., R. 3.	4th Best.....	4 00
J. D. Kelter.....	Xenia, O.....	5th Best.....	2 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Champion Ram, Any Age.....	10 00
Henry L. Wardwell.	Springfield Ctr., N. Y.	Champion Ewe, Any Age.....	10 00

## HAMPSHIRE DOWNS.

Name of Owner.	Postoffice.	Awards.	Amount.
C. O. Judd.....	Kent, O.....	Best Ram 2 Years or Over.....	\$10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	6 00
W. J. Cherry.....	Xenia, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ram 1 Year and Under 2..	10 00
C. O. Judd.....	Kent, O.....	2d Best.....	8 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	6 00
C. L. Mitchell.....	Lucas, O.....	4th Best.....	4 00
C. O. Judd.....	Kent, O.....	Best Ram Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
C. O. Judd.....	Kent, O.....	3d Best.....	4 00
W. J. Cherry.....	Xenia, O.....	4th Best.....	3 00
C. O. Judd.....	Kent, O.....	Best Ewe 2 Years or Over.....	10 00
C. O. Judd.....	Kent, O.....	2d Best.....	8 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	6 00
Cooper & Nephews..	Chicago, Ill.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ewe 1 Year and Under 2..	10 00
C. O. Judd.....	Kent, O.....	2d Best.....	8 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	6 00
C. L. Mitchell.....	Lucas, O.....	4th Best.....	4 00
C. O. Judd.....	Kent, O.....	Best Ewe Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	4 00
C. O. Judd.....	Kent, O.....	4th Best.....	3 00

## HAMPSHIRE DOWNS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
C. O. Judd.....	Kent, O.....	Best Exhibitors' Flock.....	\$10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
W. J. Cherry.....	Xenia, O.....	3d Best.....	6 00
W. J. Cherry.....	Xenia, O.....	Best Breeders' Young Flock.....	10 00
W. J. Cherry.....	Xenia, O.....	2d Best.....	8 00
C. O. Judd.....	Kent, O.....	Best Get of Sire.....	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
W. J. Cherry.....	Xenia, O.....	3d Best.....	6 00
W. J. Cherry.....	Xenia, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Champion Ram, Any Age.....	10 00
C. O. Judd.....	Kent, O.....	Champion Ewe, Any Age.....	10 00

## SOUTH DOWNS.

Name of Owner.	Postoffice.	Awards.	Amount.
Cooper & Nephews..	Chicago, Ill.....	Best Ram 2 Years or Over.....	\$10 00
W. H. Compton & Son.....	Monroe, O.....	2d Best.....	8 00
G. M. Nichols.....	Cardington, O.....	3d Best.....	6 00
R. C. Watt and Son..	Cedarville, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ram 1 Year and Under 2..	10 00
Chas. Leet & Son....	Mantua, O.....	2d Best.....	8 00
Chas. Leet & Son....	Mantua, O.....	3d Best.....	6 00
C. L. Mitchell.....	Lucas, O.....	4th Best.....	4 00
Chas. Leet & Son....	Mantua, O.....	Best Ram Under 1 Year.....	8 00
Chas. Leet & Son....	Mantua, O.....	2d Best.....	6 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	4th Best.....	2 00
R. C. Watt & Son....	Cedarville, O.....	Best Ewe 2 Years or Over.....	10 00
Chas. Leet & Son....	Mantua, O.....	2d Best.....	8 00
W. H. Compton & Son.....	Monroe, O.....	3d Best.....	6 00
W. H. Compton & Son.....	Monroe, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ewe 1 Year and Under 2..	10 00
Chas. Leet & Son....	Mantua, O.....	2d Best.....	8 00
Cooper & Nephews..	Chicago, Ill.....	3d Best.....	6 00
C. L. Mitchell.....	Lucas, O.....	4th Best.....	4 00
Chas. Leet & Son....	Mantua, O.....	Best Ewe Under 1 Year.....	8 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	6 00
Chas. Leet & Son....	Mantua, O.....	3d Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	4th Best.....	3 00
Chas. Leet & Son....	Chicago, Ill.....	Best Exhibitors' Flock.....	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
G. M. Nichols.....	Cardington, O.....	3d Best.....	6 00
W. H. Compton & Son.....	Monroe, O.....	4th Best.....	4 00
W. H. Compton & Son.....	Monroe, O.....	Best Breeders' Young Flock....	10 00
G. M. Nichols.....	Cardington, O.....	2d Best.....	8 00
R. C. Watt & Son....	Cedarville, O.....	3d Best.....	6 00
Freed Bros.....	Lancaster, O.....	4th Best.....	4 00
Chas. Leet & Son....	Mantua, O.....	Best Get of Sire.....	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
W. H. Compton & Son.....	Monroe, O.....	3d Best.....	6 00
R. C. Watt & Son....	Cedarville, O.....	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Champion Ram, Any Age.....	10 00
Cooper & Nephews..	Chicago, Ill.....	Champion Ewe, Any Age.....	10 00

## LINCOLNS.

Name of Owner.	Postoffice.	Awards.	Amount.
A. C. Fielder.....	De Graff, O.....	Best Ram 2 Years or Over.....	\$10 00
A. C. Fielder.....	De Graff, O.....	2d Best.....	8 00
W. A. Lille & Sons..	West Liberty, O.....	3d Best.....	6 00
J. R. Bickett.....	Xenia, O., R. D. 9..	4th Best.....	4 00
Cooper & Nephews..	Chicago, Ill.....	Best Ram 1 Year and Under 2..	10 00
Cooper & Nephews..	Chicago, Ill.....	2d Best.....	8 00
J. R. Bickett.....	Xenia, O.....	3d Best.....	6 00

## LINCOLNS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
W. A. Lille & Son...	West Liberty, O.....	4th Best.....	\$4 00
Cooper & Nephews...	Chicago, Ill.....	Best Ram Under 1 Year.....	8 00
W. A. Lille & Sons...	West Liberty, O.....	2d Best.....	6 00
Cooper & Nephews...	Chicago, Ill.....	3d Best.....	4 00
W. A. Lille & Sons...	West Liberty, O.....	4th Best.....	3 00
J. R. Bickett.....	Xenia, O.....	Best Ewe 2 Years or Over.....	10 00
Cooper & Nephews...	Chicago, Ill.....	2d Best.....	8 00
W. A. Lille & Sons...	West Liberty, O.....	3d Best.....	6 00
A. C. Fielder.....	De Graff, O.....	4th Best.....	4 00
Cooper & Nephews...	Chicago, Ill.....	Best Ewe 1 Year and Under 2.....	10 00
Cooper & Nephews...	Chicago, Ill.....	2d Best.....	8 00
J. R. Bickett.....	Xenia, O.....	3d Best.....	6 00
A. C. Fielder.....	De Graff, O.....	4th Best.....	4 00
Cooper & Nephews...	Chicago, Ill.....	Best Ewe Under 1 Year.....	8 00
W. A. Lille & Sons...	West Liberty, O.....	2d Best.....	6 00
Cooper & Nephews...	Chicago, Ill.....	3d Best.....	4 00
A. C. Fielder.....	De Graff, O.....	4th Best.....	3 00
Cooper & Nephews...	Chicago, Ill.....	Best Exhibitors' Flock.....	10 00
Cooper & Nephews...	Chicago, Ill.....	2d Best.....	8 00
J. R. Bickett.....	Xenia, O.....	3d Best.....	6 00
A. C. Fielder.....	De Graff, O.....	4th Best.....	4 00
J. R. Bickett.....	Xenia, O.....	Best Breeders' Young Flock.....	10 00
W. A. Lille & Sons...	West Liberty, O.....	2d Best.....	8 00
Cooper & Nephews...	Chicago, Ill.....	Best Get of Sire.....	10 00
W. A. Lille & Sons...	West Liberty, O.....	2d Best.....	8 00
A. C. Fielder.....	De Graff, O.....	3d Best.....	6 00
J. R. Bickett.....	Xenia, O.....	4th Best.....	4 00
Cooper & Nephews...	Chicago, Ill.....	Champion Ram, Any Age.....	10 00
J. R. Bickett.....	Xenia, O.....	Champion Ewe, Any Age.....	10 00

## DORSETS.

Name of Owner.	Postoffice.	Awards.	Amount.
Fillmore Farms.....	Bennington, Vt.....	Best Ram 2 Years or Over.....	\$10 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	8 00
W. H. Miner.....	Chazy, N. Y.....	3d Best.....	6 00
Nash Bros.....	Tipton, Ind.....	4th Best.....	4 00
W. H. Miner.....	Chazy, N. Y.....	Best Ram 1 Year and Under 2.....	10 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	8 00
J. B. Henderson.....	Burgettstown, Pa.....	3d Best.....	6 00
Fillmore Farms.....	Bennington, Vt.....	4th Best.....	4 00
W. H. Miner.....	Chazy, N. Y.....	Best Ram Under 1 Year.....	8 00
Nash Bros.....	Tipton, Ind.....	2d Best.....	6 00
Fillmore Farms.....	Bennington, Vt.....	3d Best.....	4 00
W. H. Miner.....	Chazy, N. Y.....	4th Best.....	3 00
Fillmore Farms.....	Bennington, Vt.....	Best Ewe 2 Years or Over.....	10 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	8 00
J. B. Henderson.....	Burgettstown, Pa.....	3d Best.....	6 00
W. H. Miner.....	Chazy, N. Y.....	4th Best.....	4 00
W. H. Miner.....	Chazy, N. Y.....	Best Ewe 1 Year and Under 2.....	10 00
Nash Bros.....	Tipton, Ind.....	2d Best.....	8 00
Fillmore Farms.....	Bennington, Vt.....	3d Best.....	6 00
W. H. Miner.....	Chazy, N. Y.....	4th Best.....	4 00
Fillmore Farms.....	Bennington, Vt.....	Best Ewe Under 1 Year.....	8 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	6 00
Fillmore Farms.....	Bennington, Vt.....	3d Best.....	4 00
W. H. Miner.....	Chazy, N. Y.....	4th Best.....	3 00
Fillmore Farms.....	Bennington, Vt.....	Best Exhibitors' Flock.....	10 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	8 00
Nash Bros.....	Tipton, Ind.....	3d Best.....	6 00
J. B. Henderson.....	Burgettstown, Pa.....	4th Best.....	4 00
Fillmore Farms.....	Bennington, Vt.....	Best Breeders' Young Flock.....	10 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	8 00
J. B. Henderson.....	Burgettstown, Pa.....	3d Best.....	6 00
H. H. Cherry.....	Xenia, O.....	4th Best.....	4 00
Fillmore Farms.....	Bennington, Vt.....	Best Get of Sire.....	10 00
W. H. Miner.....	Chazy, N. Y.....	2d Best.....	8 00
J. B. Henderson.....	Burgettstown, Pa.....	3d Best.....	6 00
H. H. Cherry.....	Xenia, O.....	4th Best.....	4 00
Fillmore Farms.....	Bennington, Vt.....	Champion Ram, Any Age.....	10 00
Fillmore Farms.....	Bennington, Vt.....	Champion Ewe, Any Age.....	10 00



## CHEVIOTS.

Name of Owner.	Postoffice.	Awards.	Amount.
W. D. Calland & Son	De Graff, O.	Best Ram 2 Years or Over.	\$10 00
G. W. Parnell.	Wingate, Md.	2d Best.	3 00
G. W. Parnell.	Wingate, Md.	3d Best.	6 00
W. D. Calland & Son	De Graff, O.	4th Best.	4 00
G. W. Parnell.	Wingate, Md.	Best Ram 1 Year and Under 2.	10 00
G. W. Parnell.	Wingate, Md.	2d Best.	8 00
F. L. Postle & Sons	Camp Chase, O.	3d Best.	6 00
F. L. Postle & Sons	Camp Chase, O.	Best Ram Under 1 Year.	8 00
G. W. Parnell.	Wingate, Md.	2d Best.	6 00
W. D. Calland & Son	De Graff, O.	3d Best.	4 00
F. L. Postle & Sons.	Camp Chase, O.	4th Best.	3 00
F. L. Postle & Sons.	Camp Chase, O.	Best Ewe 2 Years or Over.	10 00
G. W. Parnell.	Wingate, Md.	2d Best.	3 00
G. W. Parnell.	Wingate, Md.	3d Best.	6 00
W. D. Calland & Son	De Graff, O.	4th Best.	4 00
G. W. Parnell.	Wingate, Md.	Best Ewe 1 Year and Under 2.	10 00
G. W. Parnell.	Wingate, Md.	2d Best.	8 00
F. L. Postle & Sons.	Camp Chase, O.	3d Best.	6 00
W. D. Calland & Son	De Graff, O.	4th Best.	4 00
Boyd & King.	Hillsboro, O.	Best Ewe Under 1 Year.	8 00
F. L. Postle & Sons	Camp Chase, O.	2d Best.	6 00
Boyd & King.	Hillsboro, O.	3d Best.	4 00
G. W. Parnell.	Wingate, Md.	4th Best.	3 00
F. L. Postle & Sons.	Camp Chase, O.	Best Exhibitors' Flock.	10 00
G. W. Parnell.	Wingate, Md.	2d Best.	8 00
G. W. Parnell.	Wingate, Md.	3d Best.	6 00
G. W. Parnell.	Wingate, Md.	Best Breeders' Young Flock.	10 00
F. L. Postle & Sons	Camp Chase, O.	2d Best.	8 00
F. L. Postle & Sons	Camp Chase, O.	Best Get of Sire.	10 00
Boyd & King.	Hillsboro, O.	2d Best.	8 00
G. W. Parnell.	Wingate, Md.	3d Best.	6 00
W. D. Calland & Son	De Graff, O.	Champion Ram, Any Age.	10 00
G. W. Parnell.	Wingate, Md.	Champion Ewe, Any Age.	10 00

## FAT SHEEP.

Name of Owner.	Postoffice.	Awards.	Amount.
Cooper & Nephews.	Chicago, Ill.	Best Wether 1 Year and Under 2	\$8 00
Nash Bros.	Tipton, Ind.	2d Best.	5 00
Fillmore Farms.	Bennington, Vt.	Best Wether Lamb.	8 00
R. C. Watt & Son.	Cedarville, O.	2d Best.	5 00
Nash Bros.	Tipton, Ind.	Best Pen of Four Wethers, Any Age	12 00
A. C. Fielder.	De Graff, O.	2d Best.	6 00
R. C. Watt & Son.	Cedarville, O.	Best Pen of Five Wether Lambs	12 00

## EXHIBIT OF WOOLS.

Name of Owner.	Postoffice.	Awards.	Amount.
J. W. Robertson.	Cadiz, O., R. D. 2.	Best No. 1 Fine.	\$6 00
A. T. Gamber.	Wakeman, O.	2d Best.	4 00
J. W. Robertson.	Cadiz, O., R. D. 2.	3d Best.	2 00
J. H. McMullen.	Woodstock, O.	Best No. 2 Fine.	6 00
F. L. Postle & Sons	Camp Chase, O.	Best 1/2 Blood Combing.	6 00
W. J. Cherry.	Xenia, O.	Best 3/4 Blood Combing.	6 00
F. L. Postle & Sons.	Camp Chase, O.	2d Best.	4 00
Ralph Postle.	Camp Chase, O.	Best 1/4 Blood Combing.	6 00
F. L. Postle & Sons.	Camp Chase, O.	2d Best.	4 00
W. J. Cherry.	Xenia, O.	3d Best.	2 00
F. L. Postle & Sons	Camp Chase, O.	Best Braid.	6 00

## FIFTH DEPARTMENT—POULTRY

JACOB DEAN, Member in Charge.

R. F. GALLIHER..... Superintendent  
W. A. LLOYD..... Assistant Superintendent  
H. S. LYBARGER..... Clerk

## JUDGES.

G. R. HASWELL,

THEO. HEWES.

Received from entry fees 1909..... \$462 74  
Premiums offered 1909..... 1,517 50  
Premiums paid 1909..... 1,394 50  
Paid superintendent, judges, etc., 1909..... 207 80

Received from entry fees 1908..... \$367 95  
Premiums offered 1908..... 1,524 50  
Premiums paid 1908..... 1,373 50  
Paid superintendent, judges, etc., 1908..... 179 55

Name of Owner.	Postoffice.	Awards.	Amount.
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## AMERICAN CLASS—BARRED PLYMOUTH ROCK.

H. Burkholder.....	Clyde, O.....	Best Cock.....	\$2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
Sabin & Goldner.....	Warren, O.....	Best Cockerel.....	2 00
H. Burkholder.....	Clyde, O.....	2d Best.....	1 00
E. P. Roloson.....	Delaware, O., R. 4.....	Best Hen.....	2 00
H. Burkholder.....	Clyde, O.....	2d Best.....	1 00
E. P. Roloson.....	Delaware, O., R. 4.....	Best Pullet.....	2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
O. E. Miles.....	Capitol Trust Bldg., Columbus, O.....	Best Breeding Pen.....	3 00
E. P. Roloson.....	Delaware, O., R. 4.....	2d Best.....	2 00

## WHITE PLYMOUTH ROCK.

S. R. Harrison.....	Shelby, O.....	Best Cock.....	2 00
R. C. Caldwell.....	Lyndon, O.....	2d Best.....	1 00
S. R. Harrison.....	Shelby, O.....	Best Cockerel.....	2 00
S. R. Harrison.....	Shelby, O.....	2d Best.....	1 00
S. R. Harrison.....	Shelby, O.....	Best Hen.....	2 00
R. C. Caldwell.....	Lyndon, O.....	2d Best.....	1 00
S. R. Harrison.....	Shelby, O.....	Best Pullet.....	2 00
R. C. Caldwell.....	Lyndon, O.....	2d Best.....	1 00
S. R. Harrison.....	Shelby, O.....	Best Breeding Pen.....	3 00
R. C. Caldwell.....	Lyndon, O.....	2d Best.....	2 00

## BUFF PLYMOUTH ROCK.

E. H. Lantz.....	Trimble, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
E. H. Lantz.....	Trimble, O.....	Best Cockerel.....	2 00
J. R. Ross & Sons.....	Blanchester, O.....	2d Best.....	1 00
E. H. Lantz.....	Trimble, O.....	Best Hen.....	2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
E. H. Lantz.....	Trimble, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Edw. Davidson.....	Carey, O.....	Best Breeding Pen.....	3 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	2 00

## WHITE ORPINGTON.

J. Frank Mahon.....	Piqua, O.....	Best Cock.....	2 00
L. W. Cline.....	Greenwich, O.....	Best Cockerel.....	2 00
P. W. Gillman.....	Rittman, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Hen.....	2 00
J. Frank Mahon.....	Piqua, O.....	2d Best.....	1 00
L. W. Cline.....	Greenwich, O.....	Best Pullet.....	2 00
P. W. Gillman.....	Rittman, O.....	2d Best.....	1 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>BLACK ORPINGTON.</b>			
Chas. McClave.....	New London, O.....	Best Cock.....	\$2 00
Joe Coleman.....	Carey, O.....	2d Best.....	1 00
O. & W. H. Woodworth.....	Delaware, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
L. W. Cline.....	Greenwich, O.....	Best Hen.....	2 00
M. J. Nash.....	601 Phillips Ave., Toledo, O.....	2d Best.....	1 00
O. & W. H. Woodworth.....	Delaware, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
O. & W. H. Woodworth.....	Delaware, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00
<b>BUFF ORPINGTON.</b>			
H. M. Close.....	173 Tenth St., New- ark, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
P. W. Gillman.....	Rittman, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
P. W. Gillman.....	Rittman, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	2 00
E. A. May.....	Galena, O.....	2d Best.....	2 00
<b>COLUMBIAN WYANDOTTE.</b>			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
H. C. Miller.....	240 E. York St., Akron, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
Tannebaum Farms.....	Willoughby, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
Tannebaum Farms.....	Willoughby, O.....	Best Pullet.....	2 00
Tannebaum Farms.....	Willoughby, O.....	2d Best.....	1 00
M. B. Shaw.....	Cardington, O.....	Best Breeding Pen.....	3 00
W. H. Gluss.....	Tiro, O.....	2d Best.....	2 00
<b>SILVER WYANDOTTE.</b>			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
Adolph Lehne.....	Mechanicsburg, O.....	2d Best.....	1 00
Adolph Lehne.....	Mechanicsburg, O.....	Best Cockerel.....	2 00
James Akeen.....	Clintonville, O.....	2d Best.....	1 00
Adolph Lehne.....	Mechanicsburg, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Adolph Lehne.....	Mechanicsburg, O.....	Best Pullet.....	2 00
James Akeen.....	Clintonville, O.....	2d Best.....	1 00
Adolph Lehne.....	Mechanicsburg, O.....	Best Breeding Pen.....	3 00
James Akeen.....	Clintonville, O.....	2d Best.....	2 00
<b>GOLDEN WYANDOTTE.</b>			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
J. R. Ross & Sons.....	Blanchester, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
J. R. Ross & Sons.....	Blanchester, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	3 00
J. R. Ross & Sons.....	Blanchester, O.....	2d Best.....	2 00
<b>WHITE WYANDOTTE.</b>			
Hartman Stock Farm.....	Columbus, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
Herbert H. Knapp.....	Tiro, O.....	Best Pullet.....	2 00
Herbert H. Knapp.....	Tiro, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	3 00
H. H. Knapp.....	Tiro, O.....	2d Best.....	2 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## BLACK WYANDOTTE.

Chas. McClave.....	New London, O.....	Best Cock.....	\$2 00
T. M. Clemans.....	Mechanicsburg, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
T. M. Clemans.....	Mechanicsburg, O.....	2d Best.....	1 00
J. R. Ross & Sons.....	Blanchester, O.....	Best Hen.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
T. M. Clemans.....	Mechanicsburg, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00
T. M. Clemans.....	Mechanicsburg, O.....	2d Best.....	2 00

## BUFF WYANDOTTE.

Hartman Stock Farm.....	Columbus, O.....	Best Cock.....	2 00
Godfrey & Mason.....	Ashland, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
S. M. Ratcliff.....	Kingman, Ind.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Hen.....	2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Breeding Pen.....	3 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	2 00

## PARTRIDGE WYANDOTTE.

Hartman Stock Farm.....	Columbus, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Hen.....	2 00
Hartman Stock Farm.....	Columbus, O.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Pullet.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
Hartman Stock Farm.....	Columbus, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00

## SILVER PENCILED WYANDOTTE.

F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
C. W. Smith.....	Cardington, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Hen.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00

## BLACK JAVA.

J. R. Ross & Sons.....	Blanchester, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
J. R. Ross & Sons.....	Blanchester, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	3 00

## BUCKEYE RED.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
Chas. E. Cram.....	Carey, O.....	Best Cockerel.....	2 00
Chas. E. Cram.....	Carey, O.....	2d Best.....	1 00
Chas. E. Cram.....	Carey, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
Chas. E. Cram.....	Carey, O.....	2d Best.....	1 00

## R. C. RHODE ISLAND RED.

H. C. Miller.....	Akron, O.....	Best Cock.....	2 00
J. R. Ross & Sons.....	Blanchester, O.....	2d Best.....	1 00
A. G. Clark.....	Willoughby, O.....	Best Cockerel.....	2 00
Wm. A. Dumond.....	671 Wilson Ave., Columbus, O.....	2d Best.....	1 00
A. G. Clark.....	Willoughby, O.....	Best Hen.....	2 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
R. C. RHODE ISLAND RED—Concluded.			
S. E. Wurst.....	Elyria, O.....	2d Best.....	\$1 00
Wm. A. Dumond....	Columbus, O.....	Best Pullet.....	2 00
Hartman Stock Farm	Columbus, O.....	2d Best.....	1 00
M. J. Nash.....	Toledo, O.....	Best Breeding Pen.....	3 00
Wm. A. Dumond....	Columbus, O.....	2d Best.....	2 00
S. C. RHODE ISLAND RED.			
O. E. Miles.....	Columbus, O.....	Best Cock.....	2 00
Twin Oaks Farm...	Sargents, O.....	2d Best.....	1 00
L. G. Cary.....	Trimble, O.....	Best Cockerel.....	2 00
Hartman Stock Farm	Columbus, O.....	2d Best.....	1 00
O. E. Miles.....	Columbus, O.....	Best Hen.....	2 00
Twin Oaks Farm...	Sargents, O.....	2d Best.....	1 00
L. G. Cary.....	Trimble, O.....	Best Pullet.....	2 00
Hartman Stock Farm	Columbus, O.....	2d Best.....	1 00
O. E. Miles.....	Columbus, O.....	Best Breeding Pen.....	3 00
M. J. Nash.....	Toledo, O.....	2d Best.....	2 00
ASIATIC CLASS—LIGHT BRAHMA.			
C. W. Smith.....	Cardington, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
P. N. Barnes.....	Troy, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
P. N. Barnes.....	Troy, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	2 00
DARK BRAHMA.			
C. W. Smith.....	Cardington, O.....	Best Cock.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
J. R. Ross & Sons..	Blanchester, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
C. W. Smith.....	Cardington, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00
BUFF COCHIN.			
F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Hen.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
C. W. Smith.....	Cardington, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00
PARTRIDGE COCHIN.			
C. W. Smith.....	Cardington, O.....	Best Cock.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Pullet.....	2 00
C. W. Smith.....	Cardington, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00
WHITE COCHIN.			
E. G. Farber.....	East Sparta, O.....	Best Cock.....	2 00
J. H. Sayre.....	Trimble, O.....	2d Best.....	1 00
J. R. Ross & Sons..	Blanchester, O.....	Best Cockerel.....	2 00
C. W. Smith.....	Cardington, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Hen.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Pullet.....	2 00
C. W. Smith.....	Cardington, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## BLACK COCHIN.

C. W. Smith.....	Cardington, O.....	Best Cock.....	\$2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Hen.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
C. W. Smith.....	Cardington, O.....	Best Breeding Pen.....	3 00

## BLACK LANGSHAN.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
M. B. Shaw.....	Cardington, O.....	Best Breeding Pen.....	3 00

## WHITE LANGSHAN.

J. R. Ross & Sons..	Blanchester, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
J. R. Ross & Sons..	Blanchester, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00

## MEDITERRANEAN CLASS—S. C. BROWN LEGHORN.

M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
Bensch Bros.....	Rocky Ridge, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Cockerel.....	2 00
Bensch Bros.....	Rocky Ridge, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Pullet.....	2 00
J. E. McCoole.....	Troy, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Breeding Pen.....	3 00
J. E. McCoole.....	Troy, O.....	2d Best.....	2 00

## R. C. BROWN LEGHORN.

Bensch Bros.....	Rocky Ridge, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Cockerel.....	2 00
Bensch Bros.....	Rocky Ridge, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
Bensch Bros.....	Rocky Ridge, O.....	2d Best.....	1 00
Bensch Bros.....	Rocky Ridge, O.....	Best Breeding Pen.....	3 00

## ANCONA.

H. M. Bedford.....	Strongsville, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Hartman Stock Farm	Columbus, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
H. M. Bedford.....	Strongsville, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Hartman Stock Farm	Columbus, O.....	Best Breeding Pen.....	3 00
H. M. Bedford.....	Strongsville, O.....	2d Best.....	2 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
S. C. WHITE LEGHORN.			
Hartman Stock Farm	Columbus, O.....	Best Cock.....	\$2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
E. E. Eddy.....	Trimble, O.....	Best Cockerel.....	2 00
Joe Coleman.....	Carey, O.....	2d Best.....	1 00
Hartman Stock Farm	Columbus, O.....	Best Hen.....	2 00
E. E. Eddy.....	Trimble, O.....	2d Best.....	1 00
L. G. Cary.....	Trimble, O.....	Best Pullet.....	2 00
Hartman Stock Farm	Columbus, O.....	2d Best.....	1 00
W. R. Watts.....	Columbus, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00
R. C. WHITE LEGHORN.			
J. R. Ross & Sons..	Blanchester, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	3 00
C. W. Smith.....	Cardington, O.....	2d Best.....	2 00
BLACK LEGHORN.			
Joe Coleman.....	Carey, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Joe Coleman.....	Carey, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
Joe Coleman.....	Carey, O.....	2d Best.....	1 00
Joe Coleman.....	Carey, O.....	Best Pullet.....	2 00
Joe Coleman.....	Carey, O.....	2d Best.....	1 00
BUFF LEGHORN.			
F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
J. R. Ross & Sons..	Blanchester, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
BLACK MINORCA.			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
Ray Koontz.....	Ashland, O.....	2d Best.....	1 00
Ray Koontz.....	Ashland, O.....	Best Cockerel.....	2 00
C. W. Helman.....	Waverly, O.....	2d Best.....	1 00
C. W. Helman.....	Waverly, O.....	Best Hen.....	2 00
C. W. Helman.....	Waverly, O.....	2d Best.....	1 00
C. W. Helman.....	Waverly, O.....	Best Pullet.....	2 00
C. W. Helman.....	Waverly, O.....	2d Best.....	1 00
C. W. Helman.....	Waverly, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00
R. C. B. MINORCA.			
S. C. Markel.....	Crestline, O.....	Best Cock.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. C. Markel.....	Crestline, O.....	2d Best.....	1 00
S. C. Markel.....	Crestline, O.....	Best Hen.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
S. C. Markel.....	Crestline, O.....	2d Best.....	1 00
S. C. Markel.....	Crestline, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
WHITE MINORCA.			
Harry Leibold.....	Delaware, O.....	Best Cock.....	\$2 00
Harry Leibold.....	Delaware, O.....	2d Best.....	1 00
Harry Leibold.....	Delaware, O.....	Best Cockerel.....	2 00
Harry Leibold.....	Delaware, O.....	2d Best.....	1 00
Harry Leibold.....	Delaware, O.....	Best Hen.....	2 00
Harry Leibold.....	Delaware, O.....	2d Best.....	1 00
Harry Leibold.....	Delaware, O.....	Best Pullet.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
Harry Leibold.....	Delaware, O.....	Best Breeding Pen.....	3 00
Harry Leibold.....	Delaware, O.....	2d Best.....	2 00

## BLUE ANDALUSIAN.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00

## BLACK SPANISH.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	3 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	2 00

## POLISH CLASS—W. C. BLACK POLISH.

G. Brown.....	Mt. Gilead, O.....	Best Cock.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
G. Brown.....	Mt. Gilead, O.....	Best Hen.....	2 00
G. Brown.....	Mt. Gilead, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
G. Brown.....	Mt. Gilead, O.....	2d Best.....	1 00
G. Brown.....	Mt. Gilead, O.....	Best Breeding Pen.....	3 00
M. M. Myers.....	Marysville, O.....	2d Best.....	2 00

## SILVER POLISH—BEARDED OR PLAIN.

E. G. Farber.....	East Sparta, O.....	Best Cock.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Breeding Pen.....	3 00

## WHITE POLISH—BEARDED OR PLAIN.

E. G. Farber.....	East Sparta, O.....	Best Cock.....	2 00
G. Brown.....	Mt. Gilead, O.....	Best Hen.....	2 00
G. Brown.....	Mt. Gilead, O.....	2d Best.....	1 00

## GOLDEN POLISH—BEARDED OR PLAIN.

E. G. Farber.....	East Sparta, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
E. G. Farber.....	East Sparta, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00



## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>BUFF LACED POLISH.</b>			
M. M. Myers.....	Marysville, O.....	Best Cock.....	\$2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
E. G. Farber.....	East Sparta, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
<b>HAMBURG CLASS—GOLDEN SPANGLED HAMBURG.</b>			
Julius Frank & Son.	Akron, O.....	Best Cock.....	2 00
J. R. Ross & Sons...	Blanchester, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
Julius Frank & Son.	Akron, O.....	Best Hen.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Breeding Pen.....	3 00
<b>SILVER SPANGLED HAMBURG.</b>			
Julius Frank & Son.	Akron, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Cockerel.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Hen.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Pullet.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Breeding Pen.....	3 00
<b>GOLDEN PENCILED HAMBURG.</b>			
Julius Frank & Son.	Akron, O.....	Best Cock.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Hen.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Breeding Pen.....	3 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	2 00
<b>SILVER PENCILED HAMBURG.</b>			
Julius Frank & Son.	Akron, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
G. Brown.....	Mt. Gilead, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
G. Brown.....	Mt. Gilead, O.....	Best Pullet.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Breeding Pen.....	3 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	2 00
<b>BLACK HAMBURG.</b>			
Julius Frank & Son.	Akron, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Cockerel.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Pullet.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Breeding Pen.....	3 00
<b>WHITE HAMBURG.</b>			
I. M. & J. W. Farber	Sandyville, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
G. Brown.....	Mt. Gilead, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Breeding Pen.....	2 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
RED CAPS.			
Chas. McClave.....	New London, O.....	Best Cock.....	\$2 00
C. S. Rice.....	Spencer, O.....	2d Best.....	1 00
C. S. Rice.....	Spencer, O.....	Best Cockerel.....	2 00
C. S. Rice.....	Spencer, O.....	2d Best.....	1 00
C. S. Rice.....	Spencer, O.....	Best Hen.....	2 00
C. S. Rice.....	Spencer, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
C. S. Rice.....	Spencer, O.....	2d Best.....	1 00
C. S. Rice.....	Spencer, O.....	Best Breeding Pen.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00
FRENCH CLASS—HOUDAN.			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Breeding Pen.....	3 00
Hartman Stock Farm	Columbus, O.....	2d Best.....	2 00
CREVECOEUR.			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
LA FLECHE.			
F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	Best Hen.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
DORKING CLASS—COLORED DORKING.			
I. M. & J. W. Farber	Sandyville, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
SILVER GRAY DORKING.			
I. M. & J. W. Farber	Sandyville, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
WHITE DORKING.			
F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
E. G. Farber.....	East Sparta, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## GAME CLASS—BLACK BREASTED RED GAME.

F. C. Sites.....	North Dover, O.....	Best Cock.....	\$2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00

## BROWN RED GAME.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
I. M. & J. W. Farber.....	Sandyville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00

## BIRCHEN GAME.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00

## BLACK GAME.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00

## WHITE GAME.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00

## SUMATRA GAME.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00

## SILVER OR GOLDEN DUCKWING GAME.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00

## RED PYLE GAME.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
CORNISH INDIAN GAME.			
Chas. McClave.....	New London, O.....	Best Cock.....	\$2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
J. H. Sayre.....	Trimble, O.....	Best Hen.....	2 00
J. H. Sayre.....	Trimble, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
GAME BANTAM CLASS—B. B. R. BANTAM.			
I. M. & J. W. Farber	Sandyville, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
J. R. Ross & Sons..	Blanchester, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
L. D. Mangans.....	Delaware, O., R. 2..	2d Best.....	1 00
B. R. BANTAM.			
S. E. Wurst.....	Elyria, O.....	Second Best Cock.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
SILVER OR GOLDEN DUCKWING BANTAM.			
S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
RED PYLE BANTAM.			
F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
L. G. Cary.....	Trimble, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
BANTAMS NOT GAME—GOLDEN SEBRIGHT BANTAM.			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
SILVER SEBRIGHT BANTAM.			
I. M. & J. W. Farber	Sandyville, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
L. D. Mangans.....	Delaware, O.....	2d Best.....	1 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>BUFF COCHIN BANTAM.</b>			
J. R. Ross & Sons..	Blanchester, O.....	Best Cock.....	\$2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
F. E. Eager & Son..	Howell, Mich.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
J. R. Ross & Sons..	Blanchester, O.....	Best Hen.....	2 00
J. R. Ross & Sons..	Blanchester, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
<b>WHITE COCHIN BANTAM.</b>			
F. C. Sites.....	North Dover, O.....	Best Cock.....	2 00
J. Frank Mahan.....	Piqua, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
G. Brown.....	Mt. Gilead, O.....	2d Best.....	1 00
<b>BLACK COCHIN BANTAM.</b>			
S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
<b>WHITE ROSE COMB BANTAM.</b>			
L. G. Cary.....	Trimble, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Pullet.....	2 00
<b>BLACK ROSE COMB BANTAM.</b>			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
L. G. Cary.....	Trimble, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
<b>JAPANESE BANTAM.</b>			
S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
Julius Frank & Son.	Akron, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Cockerel.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Hen.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Julius Frank & Son.	Akron, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00

## TURKEYS

Name of Owner.	Postoffice.	Awards.	Amount.
<b>TURKEYS—BRONZE.</b>			
Fred Anthony.....	North Lawrence, O..	Best Cock.....	\$2 00
W. E. Cadwallader..	Lynchburg, O.....	2d Best.....	1 00
Fred Anthony.....	North Lawrence, O..	Best Cockerel.....	2 00
W. E. Cadwallader..	Lynchburg, O.....	2d Best.....	1 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## BRONZE TURKEY—Concluded.

Fred Anthony.....	North Lawrence, O.....	Best Hen.....	\$2 00
W. E. Cadwallader..	Lynchburg, O.....	2d Best.....	1 00
W. E. Cadwallader..	Lynchburg, O.....	Best Pullet.....	2 00
Fred Anthony.....	North Lawrence, O.....	2d Best.....	1 00

## WHITE.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00

## RED OR BUFF.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00

## NARRAGANSETT.

M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00

## BLACK.

S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00

## SLATE.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00

## . DUCKS

Name of Owner.	Postoffice.	Awards.	Amount.
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## DUCKS—PEKIN.

M. M. Myers.....	Marysville, O.....	Best Cock.....	\$2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
AYLESBURY.			
I. M. & J. W. Farber	Sandyville, O.....	Best Cock.....	\$2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
BLUE SWEDISH.			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
ROUEN.			
S. E. Wurst.....	Elyria, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Edw. Davidson.....	Carey, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
CAYUGA.			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
I. M. & J. W. Farber	Sandyville, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	1 00
CRESTED WHITE.			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
GRAY CALL.			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
WHITE CALL.			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00

## POULTRY—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## MUSCOVY COLORED.

M. M. Myers.....	Marysville, O.....	Best Cock.....	\$2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00

## MUSCOVY WHITE.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
Ralph Wilson.....	Bloomville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00

## INDIAN RUNNER.

M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
H. C. Miller.....	Akron, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Cockerel.....	2 00
G. W. Cast.....	Blanchester, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
F. C. Sites.....	North Dover, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
G. W. Cast.....	Blanchester, O.....	2d Best.....	1 00

## GEESE

Name of Owner.	Postoffice.	Awards.	Amount.
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## GEESE—TOULOUSE.

M. M. Myers.....	Marysville, O.....	Best Cock.....	\$2 00
Edw. Davidson.....	Carey, O.....	2d Best.....	1 00
Edw. Davidson.....	Carey, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
Edw. Davidson.....	Carey, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
Edw. Davidson.....	Carey, O.....	2d Best.....	1 00

## EMBDEN.

M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
C. S. Rice.....	Spencer, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
F. C. Sites.....	North Dover, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00

## AFRICAN.

Chas. McClave.....	New London, O.....	Best Cock.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00



## POULTRY—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>BROWN CHINESE.</b>			
M. M. Myers.....	Marysville, O.....	Best Cock.....	\$2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Hen.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
<b>WHITE CHINESE.</b>			
Chas. McClave.....	New London, O.....	Best Cock.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
S. E. Wurst.....	Elyria, O.....	Best Cockerel.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
M. M. Myers.....	Marysville, O.....	Best Pullet.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
<b>WILD.</b>			
M. M. Myers.....	Marysville, O.....	Best Cock.....	2 00
Chas. McClave.....	New London, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Cockerel.....	2 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Hen.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
Chas. McClave.....	New London, O.....	Best Pullet.....	2 00
M. M. Myers.....	Marysville, O.....	2d Best.....	1 00
<b>ORNAMENTAL.</b>			
S. E. Wurst.....	Elyria, O.....	Best Pair Pea Fowls.....	\$4 00
L. D. Mangans.....	Delaware, O., R. 2..	Best Pair Ring Neck Pheasants.....	2 50
L. D. Mangans.....	Delaware, O., R. 2..	2d Best.....	1 50
L. D. Mangans.....	Delaware, O., R. 2..	Best Pair Silver Pheasants.....	2 50
L. D. Mangans.....	Delaware, O., R. 2..	Best Pair Golden Pheasants.....	2 50
Chas. McClave.....	New London, O.....	Best Pair Silkies.....	3 00
Chas. McClave.....	New London, O.....	2d Best.....	1 50
<b>CLASS COLLECTIONS.</b>			
Chas. McClave.....	New London, O.....	Best American Class.....	\$4 00
Hartman Stock Farm	Columbus, O.....	2d Best.....	2 00
C. W. Smith.....	Cardington, O.....	Best Asiatic Class.....	4 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00
Chas. McClave.....	New London, O.....	Best Mediterranean Class.....	4 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	2 00
E. G. Farber.....	East Sparta, O.....	Best Polish Class.....	4 00
G. Brown.....	Mt. Gilead, O.....	2d Best.....	2 00
Julius Frank & Son.	Akron, O.....	Best Hamburg Class.....	4 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	2 00
S. E. Wurst.....	Elyria, O.....	Best Game and Game Bantams.....	4 00
I. M. & J. W. Farber	Sandyville, O.....	2d Best.....	2 00
I. M. & J. W. Farber	Sandyville, O.....	Best Bantams Not Game.....	4 00
S. E. Wurst.....	Elyria, O.....	2d Best.....	2 00
Chas. McClave.....	New London, O.....	Best Turkeys.....	4 00
Chas. McClave.....	New London, O.....	Best Geese.....	4 00
M. M. Myers.....	Marysville, O.....	2d Best.....	2 00
Chas. McClave.....	New London, O.....	Best Ducks.....	4 00
Chas. McClave.....	New London, O.....	2d Best.....	2 00

## SIXTH DEPARTMENT—FARM PRODUCTS

WM. MILLER, Member in Charge.

T. E. ADAMS.....Superintendent  
 N. E. SHAW.....Assistant Superintendent

## JUDGES.

S. R. GILL, HOWARD McCUNE,  
 W. L. CLEVINGER, EDMUND W. PIERCE,  
 URBAN H. DEDRICK.

Received from sale of floor exhibit 1909.....\$129 00  
 Premiums offered 1909.....3,350 00  
 Premiums paid 1909.....2,985 00  
 Paid superintendent, judges, etc., 1909.....121 13

Received from sale of floor space 1908.....\$199 20  
 Premiums offered 1908.....2,745 00  
 Premiums paid 1908.....2,437 00  
 Paid superintendent, judges, etc., 1908.....190 96

## GRAINS, SEEDS, TOBACCO AND CEREAL MILL PRODUCTS.

Name of Owner.	Postoffice.	Awards.	Amount.
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## WHITE WHEATS—SMOOTH.

I. B. Keckley.....	Marysville, O., R. R. 3	Best Peck Dawson's Golden Chaff.....	\$3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Harry Leibold.....	Delaware, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Golden Coin.....	3 00
C. C. Breece.....	Delaware, O.....	2d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Peck International No. 6.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Any Other Variety.....	3 00
Harry Leibold.....	Delaware, O.....	2d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00

## WHITE WHEATS—BEARDED.

J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Democrat.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Jones' Long Berry.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Any Other Variety.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Harry Leibold.....	Delaware, O.....	3d Best.....	1 00

## RED WHEATS—SMOOTH.

J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Poole.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Mealy.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
T. D. Kalb.....	Groveport, O.....	3d Best.....	1 00
W. D. Whipps.....	Marion, O.....	Best Peck Fultz.....	3 00
Harry W. Kramer.....	Marion, O.....	2d Best.....	2 00
T. D. Kalb.....	Groveport, O.....	3d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	Best Peck Red Cross.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
T. D. Kalb.....	Groveport, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Any Other Variety.....	3 00
Harry Leibold.....	Delaware, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00

## RED WHEATS—BEARDED.

Hilas E. Craig.....	Groveport, O.....	Best Peck Velvet Chaff.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Nigger.....	3 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	2 00
W. D. Whipps.....	Marion, O.....	3d Best.....	1 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
RED WHEATS—BEARDED—Concluded.			
T. D. Kalb.....	Groveport, O.....	Best Peck Gypsy.....	\$3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
W. H. Tobias.....	Gilboa, O.....	3d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	Best Peck Rudy.....	3 00
W. D. Whipps.....	Marion, O.....	2d Best.....	2 00
T. D. Kalb.....	Groveport, O.....	3d Best.....	1 00
Harry W. Kramer.....	Marion, O.....	Best Peck Mediterranean.....	3 00
W. D. Whipps.....	Marion, O.....	2d Best.....	2 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Any Other Variety.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
T. D. Kalb.....	Groveport, O.....	3d Best.....	1 00
WHITE OATS.			
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Silver Mine.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Howard Powell.....	Newark, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Lincoln.....	3 00
W. D. Whipps.....	Marion, O.....	2d Best.....	2 00
J. H. Tobias.....	Gilboa, O.....	3d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	Best Peck Big Four.....	3 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	2 00
J. H. Tobias.....	Gilboa, O.....	3d Best.....	1 00
C. C. Breece.....	Delaware, O.....	Best Peck Clydesdale.....	3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Banner.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Swedish.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
BLACK OATS, BARLEY, RYE, ETC.			
A. H. Powell.....	Newark, O.....	Best Peck Black Tartarian Oats.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
Harry Leibold.....	Delaware, O.....	3d Best.....	1 00
T. D. Kalb.....	Groveport, O.....	Best Peck Black Russian Oats.....	3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
W. D. Whipps.....	Marion, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Black Victor Oats.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Peck White Winter Rye.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	1 00
W. D. Whipps.....	Marion, O.....	Best Peck Black Winter Rye.....	3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
Harry W. Kramer.....	Marion, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Peck Spring Barley.....	3 00
J. T. Purks.....	Newark, O., R. R. 3	2d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Hullless Barley.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Silver Hull Buckwheat.....	3 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	2 00
W. D. Whipps.....	Marion, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O.....	Best Peck Japanese Buckwheat.....	3 00
Harry Leibold.....	Delaware, O.....	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Emmer (Spelt).....	3 00
J. T. Purks.....	Newark, O.....	2d Best.....	2 00
Harry Leibold.....	Delaware, O.....	3d Best.....	1 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Peck Common Flax Seed.....	3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Russian Flax Seed.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Canada Field Peas.....	3 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	2 00
W. D. Whipps.....	Marion, O.....	3d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	Best Peck Marrow Fat Field Peas.....	3 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	2 00
W. D. Whipps.....	Marion, O.....	3d Best.....	1 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
GRASS SEEDS.			
W. D. Whipps.....	Marlon, O.....	Best Peck Timothy.....	\$3 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	Best Peck Kentucky Blue Grass.	3 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	2d Best.....	2 00
W. D. Whipps.....	Marlon, O.....	3d Best.....	1 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	Best Peck Orchard Grass.....	3 00
W. D. Whipps.....	Marlon, O.....	2d Best.....	2 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Red Top.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck German Millet.....	3 00
W. D. Whipps.....	Marlon, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Peck Japanese Millet.....	3 00
T. D. Kalb.....	Groveport, O.....	Best Peck Hungarian Grass.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00

## CLOVER SEED.

E. L. Zehring.....	Germantown, O.....	Best Peck Mammoth Red.....	3 00
W. D. Whipps.....	Marlon, O.....	2d Best.....	2 00
C. C. Breece.....	Delaware, O.....	3d Best.....	1 00
T. D. Kalb.....	Groveport, O.....	Best Peck Common Red.....	3 00
W. H. Tobias.....	Gilboa, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
J. H. Tobias.....	Gilboa, O.....	Best Peck Alsike.....	3 00
Schmitkons Bros.....	Lorain, O., R. R. 2	2d Best.....	2 00
Oscar O. Zehring.....	Germantown, O.....	3d Best.....	1 00
T. D. Kalb.....	Groveport, O.....	Best Peck Crimson.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Peck Alfalfa.....	3 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
Howard Powell.....	Newark, O.....	Best Peck White.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
C. C. Breece.....	Delaware, O.....	3d Best.....	1 00
Harry Leibold.....	Delaware, O.....	Best Display Grasses—Clover, Alfalfa and Sedges.....	15 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	10 00
W. D. Whipps.....	Marlon, O.....	3d Best.....	5 00

## TOBACCO.

F. M. Whipps.....	West Mansfield, O.....	Best Four Hands Ohio Seed Leaf.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	50
F. M. Whipps.....	West Mansfield, O.....	Best Four Hands White Burley.	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Four Hands Little Dutch.	2 00
Oscar O. Zehring.....	Germantown, O.....	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	50
Oscar O. Zehring.....	Germantown, O.....	Best Four Hands Zimmer's Spanish.....	2 00
E. L. Zehring.....	Germantown, O.....	2d Best.....	1 00

## CORN.

Name of Owner.	Postoffice.	Awards.	Amount.
YELLOW CORN.			
A. H. Powell.....	Newark, O.....	Best Ten Ears Golden Surprise..	\$4 00
Harry W. Kramer.....	Marlon, O.....	2d Best.....	3 00
W. H. Tobias.....	Gilboa, O.....	3d Best.....	2 00
A. H. Powell.....	Newark, O.....	Best Ten Ears Beauty.....	4 00
Howard Powell.....	Newark, O.....	2d Best.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
YELLOW CORN—Concluded.			
A. H. Powell.....	Newark, O.....	Best Ten Ears Leaming.....	\$4 00
Howard Powell.....	Newark, O.....	2d Best.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Reid's Yellow Dent .....	4 00
Howard Powell.....	Newark, O.....	2d Best.....	3 00
A. H. Powell.....	Newark, O.....	3d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Clarage.....	4 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
A. H. Powell.....	Newark, O.....	3d Best.....	2 00
J. T. Purks.....	Newark, O., R. R. 3	Best Ten Ears Gold Coin.....	4 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
A. H. Powell.....	Newark, O.....	3d Best.....	2 00
E. L. Zehring.....	Germantown, O.....	Best Ten Ears Any Other Va- riety .....	4 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
A. H. Powell.....	Newark, O.....	3d Best.....	2 00

## WHITE CORN.

I. B. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Boone County...	4 00
Howard Powell.....	Newark, O.....	2d Best.....	3 00
A. H. Powell.....	Newark, O.....	3d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Silver Mine.....	4 00
A. H. Powell.....	Newark, O.....	2d Best.....	3 00
Howard Powell.....	Newark, O.....	3d Best.....	2 00
Harry W. Kramer...	Marion, O.....	Best Ten Ears White Cap.....	4 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	2d Best.....	3 00
Howard Powell.....	Newark, O.....	3d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Any Other Va- riety .....	4 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
Howard Powell.....	Newark, O.....	3d Best.....	2 00

## FLINT CORN.

A. H. Powell.....	Newark, O.....	Best Ten Ears White Flint.....	3 00
Howard Powell.....	Newark, O.....	2d Best.....	2 00
G. W. Scott.....	Lancaster, O.....	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Yellow Flint.....	3 00
G. W. Scott.....	Lancaster, O.....	2d Best.....	2 00
Harry W. Kramer...	Marion, O.....	3d Best.....	1 00

## COLORED CORN.

I. B. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Red Butcher.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
Howard Powell.....	Newark, O.....	Best Ten Ears Northwestern Gingham .....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Ten Ears Any Other Va- riety .....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
Harry W. Kramer...	Marion, O.....	3d Best.....	1 00

## POP CORN.

J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears White Pop Corn...	2 50
W. D. Whipps.....	Marion, O.....	2d Best.....	1 50
G. W. Scott.....	Lancaster, O.....	3d Best.....	50
I. B. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Red Pop Corn...	2 50
W. H. Tobias.....	Gilboa, O.....	2d Best.....	1 50
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	50
W. H. Tobias.....	Gilboa, O.....	Best Ten Ears Yellow Pop Corn	2 50
Harry W. Kramer...	Marion, O.....	2d Best.....	1 50
G. W. Scott.....	Lancaster, O.....	3d Best.....	50

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
SWEET CORN.			
C. C. Breece.....	Delaware, O.....	Best Ten Ears Early Sweet Corn, 1909 .....	\$3 00
Harry Leibold.....	Delaware, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Late Sweet Corn, 1908 .....	3 00
Harry W. Kramer..	Marion, O.....	2d Best.....	2 00
Harry Leibold.....	Delaware, O.....	3d Best.....	1 00
DISPLAYS.			
J. L. Keckley.....	Marysville, O., R. R. 3	Best Display Twelve Varieties, Yellow Field Corn, Ten Ears of Each Variety.....	15 00
W. D. Whipps.....	Marion, O.....	2d Best.....	10 00
A. H. Powell.....	Newark, O.....	3d Best.....	5 00
A. H. Powell.....	Newark, O.....	Best Display Twelve Varieties, White Field Corn, Etc.....	15 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	10 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	5 00
W. D. Whipps.....	Marion, O.....	Best Display Ten Varieties, Sweet Corn, Ten Ears, Etc...	8 00
Harry Leibold.....	Delaware, O.....	2d Best.....	5 00
Hillas E. Craig.....	Groveport, O.....	3d Best.....	3 00
A. H. Powell.....	Newark, O.....	Best Display Colored Field Corn, Ten Ears Each Variety.	5 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Display Pop Corn, Ten Ears Each Variety.....	5 00
G. W. Scott.....	Lancaster, O.....	2d Best.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Display Corn on Stalk.....	10 00
J. T. Purks.....	Newark, O., R. R. 3	2d Best.....	7 00
J. T. Purks.....	Newark, O., R. R. 3	Best Twenty Pounds Broom Corn	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	50
SWEEPSTAKES.			
J. L. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears Yellow Corn, Any Variety.....	5 00
A. H. Powell.....	Newark, O.....	2d Best.....	3 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3	Best Ten Ears White Corn, Any Variety .....	5 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
I. B. Keckley.....	Marysville, O., R. R. 3	3d Best.....	2 00
A. H. Powell.....	Newark, O.....	Best Single Ear Corn, Any Variety .....	5 00
I. B. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
G. W. Scott.....	Lancaster, O.....	3d Best.....	2 00
POTATOES AND ROOTS.			
Name of Owner.	Postoffice.	Awards.	Amount.
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck American Giant.....	\$2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Banner.....	2 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
F. M. Whipps.....	West Mansfield, O..	Best Peck Beauty of Hebron..	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
Hillas E. Craig.....	Groveport, O.....	3d Best.....	50
I. B. Keckley.....	Marysville, O., R. R. 3	Best Peck Bliss Triumph.....	2 00
Howard Powell.....	Newark, O.....	2d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Blue Victor.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	2d Best.....	1 00
Hillas E. Craig.....	Groveport, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Burpee's Early.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O..	3d Best.....	50

## FARM PRODUCTS—Continued

Name of Owner.	Postoffice.	Awards.	Amount.
POTATOES AND ROOTS—Continued.			
A. H. Powell.....	Newark, O.....	Best Peck Carman No. 3.....	\$2 00
T. D. Kalb.....	Groveport, O.....	Best Peck Early Ohio.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
W. D. Whipps.....	Marion, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Early Pride.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3.....	2d Best.....	1 00
W. D. Whipps.....	Marion, O.....	Best Peck Early Rose.....	2 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Early Trumbull.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Peck Green Mountain.....	2 00
W. D. Whipps.....	Marion, O.....	2d Best.....	1 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	Best Peck Irish Cobbler.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	2d Best.....	1 00
T. D. Kalb.....	Groveport, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Maggie Murphy.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	Best Peck Livingston.....	2 00
M. J. & C. E. Leavitt.....	Mechanicsburg, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
A. H. Powell.....	Newark, O.....	Best Peck Michigan Russet.....	2 00
Harry W. Kramer.....	Marion, O.....	2d Best.....	1 00
W. D. Whipps.....	Marion, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Potentate.....	2 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Pride of Briton.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	Best Peck New Daybreak.....	2 00
A. H. Powell.....	Newark, O.....	Best Peck Red Seneca Beauty.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Rural New Yorker.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Sensation.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Spalding No. 4.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3.....	Best Peck Uncle Sam.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	2d Best.....	1 00
Howard Powell.....	Newark, O.....	3d Best.....	50
A. H. Powell.....	Newark, O.....	Best Peck Vermont Gold Coin.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Peck White Ohio.....	2 00
I. B. Keckley.....	Marysville, O., R. R. 3.....	2d Best.....	1 00
W. D. Whipps.....	Marion, O.....	3d Best.....	50
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	Best Peck Whitton's White Mammoth.....	2 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.....	Best Display Twenty-five Va- rieties Irish Potatoes, One Peck Each.....	20 00
Jas. L. Deal.....	Marysville, O., R. R. 3.....	2d Best.....	15 00
A. H. Powell.....	Newark, O.....	3d Best.....	10 00
A. H. Powell.....	Newark, O.....	Best Peck Yellow Sweet Po- tatoes.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
T. D. Kalb.....	Groveport, O.....	Best Peck Red Sweet Potatoes.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Peck White Sweet Pota- toes.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck Red Yams.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Peck White Yams.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Display, Six Varieties, Sweet Potatoes and Yams.....	4 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Twelve Carrots, Chanteney.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3.....	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3.....	Best Twelve Carrots, Long Orange.....	2 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	1 00
Howard Powell.....	Newark, O.....	3d Best.....	50

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
POTATOES AND ROOTS—Continued.			
F. M. Whipps.....	West Mansfield, O..	Best Twelve Carrots, Oxheart..	\$2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	50
A. H. Powell.....	Newark, O.....	Best Twelve Carrots, White Belgian.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Twelve Carrots, Yellow Belgian.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Display Carrots, Six of Each Variety, Six Varie- ties.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Twelve Parsnips.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
Elmer Husted.....	Husted, O.....	Best Twelve Roots Salsify.....	2 00
F. M. Whipps.....	West Mansfield, O..	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	50
R. H. Deal.....	Marysville, O., R. R. 3	Best Six Beets, Eclipse.....	2 00
J. T. Purks.....	Newark, O., R. R. 3	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Six Beets, Columbian.....	2 00
J. T. Purks.....	Newark, O., R. R. 3	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Six Beets, Crosby's Eryp- tian.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
J. T. Purks.....	Newark, O., R. R. 3	Best Six Beets, Dark Blood Turnip.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O..	3d Best.....	50
A. H. Powell.....	Newark, O.....	Best Six Beets, Long Blood.....	2 00
Howard Powell.....	Newark, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Six Sugar Beets.....	2 00
Howard Powell.....	Newark, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Three Beets, Long Red Mangel Wurzel.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	50
E. B. Fent & Sons..	Kenton, O.....	Best Three Beets, Long Yellow Mangel Wurzel.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Three Beets, Red Globe..	2 00
Howard Powell.....	Newark, O.....	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
Howard Powell.....	Newark, O.....	Best Three Beets, Yellow Globe.....	2 00
F. M. Whipps.....	West Mansfield, O..	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Display Beets.....	5 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	3 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Six Purple Kohlrabi..	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	2d Best.....	1 00
F. J. Coburn.....	Mechanicsburg, O..	3d Best.....	50
Harry Leibold.....	Delaware, O.....	Best Six White Kohlrabi..	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O..	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Six Rutabagas, White.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Six Rutabagas, Yellow..	2 00
F. J. Coburn.....	Mechanicsburg, O..	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	50
T. D. Kalb.....	Groveport, O.....	Best Peck Turnips, Purple Top.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O..	3d Best.....	50
T. D. Kalb.....	Groveport, O.....	Best Peck Turnips, White Top..	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Onions, Red Globe..	2 00
F. M. Whipps.....	West Mansfield, O..	2d Best.....	1 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	3d Best.....	50



## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
POTATOES AND ROOTS—Concluded.			
F. M. Whipps.....	West Mansfield, O.	Best Peck Onions, White Globo.	\$2 00
M. J. & C. E. Leavitt	Mechanicsburg, O.	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Peck Onions, Yellow Globe Danvers .....	2 00
Hilas E. Craig.....	Groveport, O.	2d Best.....	1 00
E. B. Fent & Sons..	Kenton, O.	3d Best.....	50
A. H. Powell.....	Newark, O.	Best Peck Onions, Red Weth- ersfield .....	2 00
Howard Powell.....	Newark, O.	2d Best.....	1 00
M. J. & C. E. Leavitt	Mechanicsburg, O.	3d Best.....	50
A. H. Powell.....	Newark, O.	Best Peck Onions, Prize Taker..	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	50
F. M. Whipps.....	West Mansfield, O.	Best Peck Onions, Potato.....	2 00
Jas. L. Deal.....	Marysville, O., R. R. 3	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	50
A. H. Powell.....	Newark, O.	Best Display Onions, Ten Va- rieties .....	5 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	3 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	2 00

## VEGETABLES.

Name of Owner.	Postoffice.	Awards.	Amount.
TOMATOES.			
J. T. Purks.....	Newark, O., R. R. 3.	Best Peck Acme.....	\$3 00
A. H. Powell.....	Newark, O.	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	1 00
A. H. Powell.....	Newark, O.	Best Peck Buckeye State.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	1 00
A. H. Powell.....	Newark, O.	Best Peck Beauty.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	1 00
Harry W. Kramer...	Marion, O.	Best Peck Coreless.....	3 00
W. D. Whipps.....	Marion, O.	2d Best.....	2 00
A. H. Powell.....	Newark, O.	Best Peck Dwarf Champion....	3 00
Elmer Husted.....	Husted, O.	2d Best.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	1 00
A. H. Powell.....	Newark, O.	Best Peck Favorite.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	1 00
Howard Powell.....	Newark, O.	Best Peck Golden Queen.....	3 00
A. H. Powell.....	Newark, O.	2d Best.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	1 00
A. H. Powell.....	Newark, O.	Best Peck New Globe.....	3 00
Howard Powell.....	Newark, O.	2d Best.....	2 00
A. H. Powell.....	Newark, O.	Best Peck Ponderosa.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.	3d Best.....	1 00
Elmer Husted.....	Husted, O.	Best Peck Stone.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
A. H. Powell.....	Newark, O.	3d Best.....	1 00
A. H. Powell.....	Newark, O.	Best Peck Magnus.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	Best Peck Enormous.....	3 00
Elmer Husted.....	Husted, O.	2d Best.....	2 00
A. H. Powell.....	Newark, O.	3d Best.....	1 00
A. H. Powell.....	Newark, O.	Best Peck Jewel.....	3 00
Hilas E. Craig.....	Groveport, O.	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.	Best Peck Yellow Pear.....	3 00
T. D. Kalb.....	Groveport, O.	2d Best.....	2 00
A. H. Powell.....	Newark, O.	Best Display Tomatoes, Ten Varieties .....	10 00
Hilas E. Craig.....	Groveport, O.	2d Best.....	6 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
CABBAGE.			
G. W. Wildman.....	Springfield, O., R. R. 5	Best All Seasons.....	\$2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
W. D. Whipps.....	Marion, O.....	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Autumn King.....	2 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	Best Surehead.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
W. D. Whipps.....	Marion, O.....	Best Flat Dutch.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	50
W. D. Whipps.....	Marion, O.....	Best Drumhead.....	2 00
Harry W. Kramer.....	Marion, O.....	2d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	50
A. H. Powell.....	Newark, O.....	Best Red Dutch.....	2 00
F. M. Whipps.....	West Mansfield, O.....	2d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	50
Jas. L. Deal.....	Marysville, O., R. R. 3	Best Winninstadt.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Early Summer.....	2 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
T. D. Kalb.....	Groveport, O.....	Best Danish Ball.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Wakefield.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
M. J. & C. E. Leavitt	Mechanicsburg, O.....	3d Best.....	50
Harry W. Kramer.....	Marion, O.....	Heaviest Head of Cabbage.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Heaviest.....	1 00
Elmer Husted.....	Husted, O.....	3d Heaviest.....	50
T. D. Kalb.....	Groveport, O.....	Best Six Stalks White Plume Celery.....	2 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3.	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Six Stalks Golden Self Blanching Celery.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3.	3d Best.....	50
Hilas E. Craig.....	Groveport, O.....	Best Six Stalks Giant Pascal Celery.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3.	3d Best.....	50
Albert Pearce.....	Groveport, O.....	Best Display of Celery, Five Varieties.....	5 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	3 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	2 00
J. T. Purks.....	Newark, O., R. R. 3.	Twelve Largest Peppers.....	2 00
A. H. Powell.....	Newark, O.....	2d Largest.....	1 00
Hilas E. Craig.....	Groveport, O.....	3d Largest.....	50
A. H. Powell.....	Newark, O.....	Best Display of Peppers on Stalk.....	5 00
G. W. Wildamn.....	Springfield, O., R. R. 5	2d Best.....	3 00
Hilas E. Craig.....	Groveport, O.....	3d Best.....	2 00

## SQUASHES.

Name of Owner.	Postoffice.	Awards.	Amount.
F. M. Whipps.....	West Mansfield, O.	Best Boston Marrow.....	\$3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
Elmer Husted.....	Husted, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Cushaw.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
J. L. Anderson.....	Gahanna, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Essex Hybrid.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
F. M. Whipps.....	West Mansfield, O.	Best Hubbard.....	3 00
F. J. Coburn.....	Mechanicsburg, O.	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	Best Red Hubbard.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
SQUASHES—Concluded.			
A. H. Powell.....	Newark, O.....	Best Yellow Crookneck.....	\$3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
Harry W. Kramer.....	Marion, O.....	3d Best.....	1 00
F. J. Coburn.....	Mechanicsburg, O.....	Best Yellow Scallop.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
F. M. Whipps.....	West Mansfield, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Ford Hook.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
W. D. Whipps.....	Marion, O.....	3d Best.....	1 00
W. H. Tobias.....	Gilboa, O.....	Best Marble Head.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
F. J. Coburn.....	Mechanicsburg, O.....	Best Mammoth Chilli.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	Best Display of Gourds.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	Heaviest Squash.....	3 00
Elmer Husted.....	Husted, O.....	2d Heaviest.....	2 00
A. H. Powell.....	Newark, O.....	Best Display Squashes and Pumpkins.....	10 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	6 00
A. H. Powell.....	Newark, O.....	Best Three Yellow Field Pumpkins.....	3 00
W. D. Whipps.....	Marion, O.....	2d Best.....	2 00
Elmer Husted.....	Husted, O.....	Best Three Sweet or Pie Pumpkins.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Heaviest Sweet Pumpkins.....	3 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Heaviest.....	2 00
Elmer Husted.....	Husted, O.....	3d Heaviest.....	1 00

## WATERMELONS.

Name of Owner.	Postoffice.	Awards.	Amount.
T. D. Kalb.....	Groveport, O.....	Best Black Diamond.....	\$3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	Best Kolb's Gem.....	3 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	Best Ice Cream.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
Hilas E. Craig.....	Groveport, O.....	Best Sweet Heart.....	3 00
F. J. Coburn.....	Mechanicsburg, O., R. R. 3.	Best Phinney's Early.....	3 00
J. T. Purks.....	Newark, O., R. R. 3.	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Best Rattlesnake.....	3 00
Elmer Husted.....	Husted, O.....	Best Kleckley's Sweet.....	3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Dark Icing.....	3 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	2 00
Elmer Husted.....	Husted, O.....	Best Light Icing.....	3 00
A. H. Powell.....	Newark, O.....	2d Best.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	Best Citron.....	3 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
Hilas E. Craig.....	Groveport, O.....	Heaviest Watermelon.....	3 00
T. D. Kalb.....	Groveport, O.....	2d Heaviest.....	2 00
A. H. Powell.....	Newark, O.....	3d Heaviest.....	1 00
A. H. Powell.....	Newark, O.....	Best Display Watermelons.....	12 00
Hilas E. Craig.....	Groveport, O.....	2d Best.....	3 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>MUSKMELONS.</b>			
J. L. Keckley.....	Marysville, O., R. R. 3	Best Osage.....	\$2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Montreal.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
Elmer Husted.....	Husted, O.....	Best Bay View.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Baltimore.....	2 00
Elmer Husted.....	Husted, O.....	2d Best.....	1 00
Hillas E. Craig.....	Groveport, O.....	3d Best.....	50
Hillas E. Craig.....	Groveport, O.....	Best Banana.....	2 00
J. L. Anderson.....	Gahanna, O.....	2d Best.....	1 00
Elmer Husted.....	Husted, O.....	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Tip Top.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	Best Hackensack.....	2 00
Hillas E. Craig.....	Groveport, O.....	2d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Rocky Ford.....	2 00
J. L. Anderson.....	Gahanna, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
J. L. Anderson.....	Gahanna, O.....	Best Emerald Gem.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
J. T. Purks.....	Newark, O., R. R. 3	3d Best.....	50
J. T. Purks.....	Newark, O., R. R. 3	Best Display Muskmelons.....	12 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	8 00
Hillas E. Craig.....	Groveport, O.....	3d Best.....	5 00
J. T. Purks.....	Newark, O., R. R. 3	Best Twelve Cucumbers.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
G. W. Wildman.....	Springfield, O., R. R. 5	Best Display Cucumbers.....	3 00
J. T. Purks.....	Newark, O., R. R. 3	2d Best.....	2 00
A. H. Powell.....	Newark, O.....	3d Best.....	1 00
Howard Powell.....	Newark, O.....	Best Three Purple Egg Plants.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	50
Harry W. Kramer.....	Marion, O.....	Best Two Quarts Lima Beans.....	2 00
Hillas E. Craig.....	Groveport, O.....	2d Best.....	1 00
J. L. Keckley.....	Marysville, O., R. R. 3	3d Best.....	50
A. H. Powell.....	Newark, O.....	Best Two Quarts Marrowfat Beans.....	2 00
Harry W. Kramer.....	Marion, O.....	2d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	50
I. N. Keckley.....	Marysville, O., R. R. 3	Best Two Quarts Navy Beans.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Two Quarts Golden Wax Beans.....	2 00
Harry W. Kramer.....	Marion, O.....	2d Best.....	1 00
A. H. Powell.....	Newark, O.....	3d Best.....	50
Jas. L. Deal.....	Marysville, O., R. R. 3	Best Two Quarts White Kidney Beans.....	2 00
J. L. Keckley.....	Marysville, O., R. R. 3	2d Best.....	1 00
Harry W. Kramer.....	Marion, O.....	3d Best.....	50
F. M. Whipps.....	West Mansfield, O.....	Best Two Quarts Red Kidney Beans.....	2 00
G. W. Wildman.....	Springfield, O., R. R. 5	2d Best.....	1 00
Jas. L. Deal.....	Marysville, O., R. R. 3	3d Best.....	50
J. L. Keckley.....	Marysville, O., R. R. 3	Best Red Valentine Beans.....	2 00
A. H. Powell.....	Newark, O.....	2d Best.....	1 00
Harry Lethold.....	Delaware, O.....	3d Best.....	50
Howard Powell.....	Newark, O.....	Best Display of Beans, Ten Varieties.....	6 00
Harry Lethold.....	Delaware, O.....	2d Best.....	4 00
J. L. Anderson.....	Gahanna, O.....	Best Display Vegetables.....	30 00
J. T. Purks.....	Newark, O., R. R. 3	2d Best.....	20 00
Hillas E. Craig.....	Groveport, O.....	3d Best.....	15 00
G. W. Wildman.....	Springfield, O., R. R. 5	4th Best.....	10 00

## FARM PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## COUNTY EXHIBITS.

J. L. Keckley.....	Marysville, O., R. R. 3	Best Representative Exhibit of Farm Products.....	\$280 00
A. H. Powell.....	Newark, O.....	2d Best.....	250 00
G. W. Wildman.....	Springfield, O., R. R. 5	3d Best.....	220 00
Hilas E. Craig.....	Groveport, O.....	4th Best.....	190 00
F. M. Whipps.....	West Mansfield, O.....	5th Best.....	160 00
M. J. & C. E. Leavitt	Mechanicsburg, O...	6th Best.....	130 00

## DAIRY PRODUCTS.

Name of Owner.	Postoffice.	Awards.	Score.	Amount.
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## CREAMERY BUTTER.

The West Jefferson Creamery Co. ....	Columbus, O.....	Best Twenty Pounds or More in Tubs or Single Pound Prints .....	92½%	\$50 00
The Sunbury Co-Op- erative Creamery Co. ....	Sunbury, O.....	.....	92 %	40 00
C. M. McConnell.....	Woodstock, O.....	.....	90 %	10 00

## DISPLAY CREAMERY BUTTER.

Name of Owner.	Postoffice.	Awards.	Amount.
The Sunbury Co-Op- erative Creamery Co. ....	Sunbury, O.....	Best Display Creamery Butter..	\$20 00
The West Jefferson Creamery Co. ....	Columbus, O.....	2d Best.....	10 00

## HOME DAIRY BUTTER.

Name of Owner.	Postoffice.	Awards.	Amount.
Mrs. Henry Bleber...	Delaware, O., R. R. 3	Best Box of Five-Pound Single Prints .....	\$20 00

## BEES AND HONEY.

Name of Owner.	Postoffice.	Awards.	Amount.
M. J. & C. E. Leavitt	Mechanicsburg, O...	Pest Display Comb Honey.....	\$15 00
C. F. Perkins.....	Columbus, O.....	2d Best.....	8 00
Mrs. T. A. Beach.....	Delaware, O.....	Best Case Twenty-four Sec- tions White Clover Comb Honey .....	3 00
M. J. & C. E. Leavitt	Mechanicsburg, O...	2d Best.....	2 00
C. F. Perkins.....	Columbus, O.....	Best Case Twenty-four Sec- tions Bass Wood Comb 2d Best.....	2 00
Jessie Goodrich.....	Powell, O.....	Honey .....	3 00

## FARM PRODUCTS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
BEES AND HONEY—Concluded.			
C. F. Perkins.....	Columbus, O.....	Best Case Twenty-four Sections Comb Honey From Fall Flowers .....	\$3 00
Jessie Goodrich.....	Powell, O.....	Best Display Extracted Honey..	15 00
C. F. Perkins.....	Columbus, O., 1208 Nell Ave.....	2d Best.....	8 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	Best Six Jars Extracted Honey, Quart Size .....	3 00
Jessie Goodrich.....	Powell, O.....	2d Best.....	2 00
Jessie Goodrich.....	Powell, O.....	Best Six Jars Extracted Honey, Pint Size .....	2 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	2d Best.....	1 00
Jessie Goodrich.....	Powell, O.....	Best Display Canded Honey.....	5 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	2d Best.....	3 00
C. F. Perkins.....	Columbus, O., 1208 Nell Ave.....	Best Display Beeswax.....	2 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	2d Best.....	1 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	Best Nucleus Italian Bees.....	3 00
M. J. Leavitt.....	Mechanicsburg, O....	2d Best.....	2 00
M. J. Leavitt.....	Mechanicsburg, O....	Best Nucleus Carniolan Bees...	3 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	2d Best.....	2 00
M. J. & C. E. Leavitt	Mechanicsburg, O....	Largest and Finest Display of Honey, Comb and Extracted Quantity .....	20 00
Jessie Goodrich.....	Powell, O.....	2d Best.....	10 00

## MAPLE PRODUCTS.

Name of Owner.	Postoffice.	Awards.	Amount.
H. C. Miller.....	Akron, O.....	Best Gallon Maple Syrup.....	\$3 00
E. J. Strong.....	Huntsburg, O.....	2d Best.....	2 00
E. J. Strong.....	Huntsburg, O.....	Best Three Bricks Maple Sugar.	3 00
D. G. Coyner.....	Lyndon, O., Box 57..	2d Best.....	2 00
H. C. Miller.....	Akron, O.....	Best Design in Maple Sugar.....	2 00
E. J. Strong.....	Huntsburg, O.....	2d Best.....	1 00
E. J. Strong.....	Huntsburg, O.....	Best Five-Pound Grained Maple Sugar .....	3 00
H. C. Miller.....	Akron, O.....	2d Best.....	2 00
F. I. Bartholomew....	Huntsburg, O.....	Best Display Maple Cream.....	3 00
D. G. Coyner.....	Lyndon, O., Box 57..	2d Best.....	2 00
H. C. Miller.....	Akron, O.....	Largest, Best and Most Attractive Display of Maple Products From Any One County of the State.....	20 00
F. I. Bartholomew....	Huntsburg, O.....	2d Best.....	10 00
D. G. Coyner.....	Lyndon, O., Box 57..	Largest, Best and Most Attractive Display of Maple Products by a Dealer.....	Medal.

## SEVENTH DEPARTMENT—HORTICULTURAL PRODUCTS

WM. MILLER, Member in Charge.

F. H. BALLOU.....Superintendent  
 F. H. STEVENS.....Assistant Superintendent  
 S. G. HARRY.....Assistant Superintendent

## JUDGES.

T. A. FARRAND, CHAS. H. JORDAN, DAVID K. BELL

Received from sale of floor space 1909.....\$18 00  
 Premiums offered 1909.....2,080 50  
 Premiums paid 1909.....1,837 00  
 Paid superintendent, judges, etc., 1909.....189 85

Received from sale of floor space 1908.....  
 Premiums offered 1908.....\$1,611 00  
 Premiums paid 1908.....1,517 00  
 Paid superintendent, judges, etc., 1908.....88 15

## SUMMER, FALL AND WINTER APPLES.

Name of Owner.	Postoffice.	Awards.	Amount.
W. W. Farnsworth..	Waterville, O.....	Best Three Varieties of Summer for Market, Grown North of Columbus .....	\$3 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	2 00
C. W. Counter.....	Toledo, O.....	3d Best.....	1 00
J. P. Eaton.....	Proctorville, O., R. 1	Best Three Varieties of Summer for Market, Grown South of Columbus .....	3 00
Lewis Hunt.....	Proctorville, O.....	2d Best.....	2 00
E. G. Cox.....	Proctorville, O.....	3d Best.....	1 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	Best Three Varieties of Fall for Market, Grown North of Columbus .....	3 00
Mabel Hutchinson....	Clyde, O.....	2d Best.....	2 00
Fred Hutchinson....	Clyde, O.....	3d Best.....	1 00
Lewis Hunt.....	Proctorville, O.....	Best Three Varieties of Fall for Market, Grown South of Columbus .....	3 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	2 00
B. F. McCown.....	Proctorville, O.....	3d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Six Varieties of Winter for Market, Grown North of Columbus .....	5 00
Mabel Hutchinson....	Clyde, O.....	2d Best.....	3 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	3d Best.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Six Varieties of Winter for Market, Grown South of Columbus .....	5 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	3 00
B. F. McCown.....	Proctorville, O.....	3d Best.....	2 00
Mabel Hutchinson....	Clyde, O.....	Best Collection Twelve Varieties, Summer, Fall and Winter, for Market, Grown North of Columbus .....	3 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	2d Best.....	5 00
R. A. Gill.....	Port Clinton, O.....	3d Best Collection Twelve Varieties, Summer, Fall and Winter, for Market, Grown North of Columbus .....	3 00
E. G. Cox.....	Proctorville, O.....	Best Collection Twelve Varieties, Summer, Fall and Winter for Market, Grown South of Columbus .....	8 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	5 00
Lewis Hunt.....	Proctorville, O.....	3d Best.....	3 00
Lewis Hunt.....	Proctorville, O.....	Best Variety Summer Dessert..	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Variety Fall Dessert.....	2 00
J. F. Eaton.....	Proctorville, O., R. 1	2d Best.....	1 00
J. F. Eaton.....	Proctorville, O., R. 1	Best Variety Winter Dessert....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
		Summer, Fall and Winter Apples —Concluded.	
Mrs. T. S. Johnson...	Port Clinton, O., R. 1	Best Collection Six Varieties, Summer, Fall and Winter for Dessert and Culinary Pur- poses, Grown North of Colum- bus .....	\$6 00
H. W. Schmitkons...	Lorain, O., R. R. 2..	2d Best .....	4 00
E. G. Cox.....	Proctorville, O.....	Best Collection Six Varieties, Summer, Fall and Winter, for Dessert and Culinary Purposes, Grown South of Columbus.....	6 00
I. B. Keckley.....	Marysville, O., R. 3..	2d Best.....	4 00
B. F. McCown.....	Proctorville, O.....	3d Best.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Variety Fall, Size and Beauty to Rule.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
Lewis Hunt.....	Proctorville, O.....	Best Variety Winter, Size and Beauty to Rule.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Collection Six Varieties, Summer, Fall and Winter, Size and Beauty to Rule.....	6 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	4 00
Lewis Hunt.....	Proctorville, O.....	3d Best Collection Six Varieties Summer, Fall and Winter, Size and Beauty to Rule.....	2 00
H. W. Schmitkons...	Lorain, O., R. R. 2..	Best Display Twenty-five Va- rieties, Summer, Fall and Winter, Grown North of Colum- bus, Dessert, Culinary and Market Qualities to be Equally Considered .....	20 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	15 00
R. A. Gill.....	Port Clinton, O.....	3d Best.....	10 00
U. T. Cox.....	Proctorville, O.....	Best Display Twenty-five Va- rieties, Summer, Fall and Win- ter, Grown South of Columbus, Dessert, Culinary and Market Qualities to be equally Con- sidered .....	20 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	15 00
Lewis Hunt.....	Proctorville, O.....	3d Best.....	10 00
U. T. Cox.....	Proctorville, O.....	Best Bushel Box of Apples, Fruit, Package and Packing to be considered.....	5 00
B. F. McCown.....	Proctorville, O.....	2d Best.....	3 00
E. G. Cox.....	Proctorville, O.....	3d Best.....	2 00

## PLATE APPLES.

Name of Owner.	Postoffice.	Awards.	Amount.
		Summer and Fall.	
W. W. Farnsworth..	Waterville, O.....	Best Plate Alexander.....	\$2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
J. P. Eaton.....	Proctorville, O., R. 1	Best Plate Benoni.....	2 00
L. B. Pollock.....	Milford, O., R. R. 1.	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Cayuga Red Streak..	2 00
E. G. Cox.....	Proctorville, O.....	Best Plate Chenango Strawberry.	2 00
U. T. Cox.....	Proctorville, O.....	2d Best Plate.....	1 00
Moses A. Hagler...	Xenia, O., Box 69..	Best Plate Duchess of Oldenburg	2 00
H. C. Kiefaber.....	Frankfort, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Fall Pippin.....	2 00
M. L. Peterson.....	Frankfort, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Jeffries.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Gravenstein.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Lowell.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
M. I. Shively.....	Chillicothe, O.....	Best Plate Maiden's Blush.....	2 00
Lewis Hunt.....	Proctorville, O.....	2d Best.....	1 00



## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
Summer and Fall—Concluded.			
W. W. Farnsworth..	Waterville, O.....	Best Plate Ohio Nonpareil.....	\$2 00
Mrs. T. S. Johnson..	Port Clinton, O. R. 1	2d Best.....	1 00
L. B. Pollock.....	Milford, O., R. R. 1..	Best Plate Porter.....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Red Astrachan.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate St. Lawrence.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	Best Plate Sweet Bough.....	2 00
Fred Hutchinson..	Clyde, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Wealthy.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Yellow Transparent.	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
Lewis Hunt.....	Proctorville, O.....	Best Plate New Seedling.....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
Winter Apples.			
Fred Hutchinson..	Clyde, O.....	Best Plate Baltimore.....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Banana.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
M. I. Shively.....	Chillicothe, O.....	Best Plate Baldwin.....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00
Fred Hutchinson..	Clyde, O.....	Best Plate Belmont.....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00
J. P. Eaton.....	Proctorville, O., R. 1	Best Plate Ben Davis.....	2 00
Lewis Hunt.....	Proctorville, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Dominie.....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Fallawater.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Fameuse.....	2 00
Fred Hutchinson..	Clyde, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Gano.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
B. F. McCown.....	Proctorville, O.....	Best Plate Grimes' Golden.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Hendrick's Sweet....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Hubbardston.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Plate Jonathan.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate King (Tompkins Co.)	2 00
J. A. Stokes.....	Fremont, O.....	2d Best.....	1 00
C. C. Breece.....	Delaware, O.....	Best Plate Minkler.....	2 00
Harry Leibold.....	Delaware, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Northern Spy.....	2 00
Fred Hutchinson..	Clyde, O.....	2d Best.....	1 00
W. H. West.....	Chillicothe, O.....	Best Plate Paradise Winter Sweet	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Peck's Pleasant.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
Lewis Hunt.....	Proctorville, O.....	Best Plate Rambo.....	2 00
H. C. Kiefaber.....	Frankfort, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Raule's Janet.....	2 00
Lewis Hunt.....	Proctorville, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Red Canada.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Rhode Island Green- ing.....	2 00
J. A. Stokes.....	Fremont, O.....	2d Best.....	1 00
B. F. McCown.....	Proctorville, O.....	Best Plate Rome Beauty.....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Roxbury Russet.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Seek-No-Further....	2 00
H. Burkholder.....	Clyde, O.....	2d Best Plate.....	1 00
J. P. Eaton.....	Proctorville, O., R. 1	Best Plate Smith's Cider.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
Mabel Hutchinson..	Clyde, O.....	Best Plate Spitzenberg Esopus..	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Smoke House.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Plate Stark.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
M. L. Peterson.....	Frankfort, O.....	Best Plate Stayman's Winesap..	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Sutton Beauty.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>Winter Apples—Concluded.</b>			
C. W. Counter.....	Toledo, O.....	Best Plate Tahman Sweet.....	\$2 00
H. Burkholder.....	Clyde, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Wagener.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate White Pippin.....	2 00
T. D. Kalb.....	Groveport, O.....	2d Best.....	1 00
W. H. Ortman.....	Chillicothe, O.....	Best Plate Willow Twig.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Plate Wine Sap.....	2 00
H. C. Kiefaber.....	Frankfort, O.....	2d Best.....	1 00
Lewis Hunt.....	Proctorville, O.....	Best Plate Wolf River.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate York Imperial.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
Lewis Hunt.....	Proctorville, O.....	Best Plate New Seedling.....	2 00
<b>Crab Apples.</b>			
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Hyslop.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
M. I. Shively.....	Chillicothe, O.....	Best Plate Transcendant.....	2 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	2d Best.....	1 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	Best Plate Whitney's No. 20....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00
H. W. Schmitkons..	Lorain, O., R. R. 2..	Best Display, Five Varieties.....	3 00

## PEACHES, QUINCES AND PLUMS.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>Peaches.</b>			
R. A. Gill.....	Port Clinton, O.....	Best Five Varieties, Dessert and Culinary Qualities Considered.	\$5 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	3 00
C. W. Counter.....	Toledo, O.....	3d Best.....	2 00
R. A. Gill.....	Port Clinton, O.....	Best Five Varieties, Market Qualities Considered.....	5 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	3 00
W. W. Farnsworth..	Waterville, O.....	3d Best.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Collection Eight Varieties Dessert, Culinary and Market Qualities Considered.....	7 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	5 00
W. W. Farnsworth..	Waterville, O.....	3d Best.....	3 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Collection Twelve Varieties, Dessert, Culinary and Market Qualities Considered.....	10 00
A. S. Keckley.....	Marysville, O.....	2d Best.....	7 00
R. A. Gill.....	Port Clinton, O.....	3d Best.....	5 00
Fred Hutchinson....	Clyde, O.....	Best Plate Banner.....	2 00
M. I. Shively.....	Chillicothe, O.....	Best Plate Beer's Smock.....	2 00
H. C. Kiefaber.....	Frankfort, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton.....	Best Plate Briner.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Chair's Choice.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Carman.....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
H. Burkholder.....	Clyde, O.....	Best Plate Champion.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Captain Ede.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Crawford's Early....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Crawford's Late.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
M. I. Shively.....	Chillicothe, O.....	Best Plate Crosby.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Diamond.....	2 00
C. W. Counter.....	Toledo, O.....	Best Plate Early Toledo.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
M. L. Peterson.....	Frankfort, O.....	Best Plate Elberta.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
Peaches—Concluded			
W. W. Farnsworth..	Waterville, O.....	Best Plate Foster.....	\$2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Fitzgerald.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Kalamazoo.....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Lemon Free.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Lewis Seedling.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Matthews.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Mountain Rose.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate New Prolific.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Niagara.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
M. L. Peterson.....	Frankfort, O.....	Best Plate Old Mixon Free.....	2 00
M. I. Shively.....	Chillicothe, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Smock Free.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Stephens.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Stump.....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate New Seedling.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
Quinces.			
M. I. Shively.....	Chillicothe, O.....	Best Plate Meech.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Rea's Mammoth.....	2 00
Harrison Bookwalter	Hallsville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Orange.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Peck Quinces.....	2 00
Harrison Bookwalter	Hallsville, O.....	2d Best.....	1 00
Plums.			
U. T. Cox.....	Proctorville, O.....	Best Five Varieties, Dessert and Culinary Qualities Considered.	5 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	3 00
H. Burkholder.....	Clyde, O.....	3d Best.....	2 00
E. G. Cox.....	Proctorville, O.....	Best Five Varieties, Market Qualities Considered.....	5 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	3 00
W. W. Farnsworth..	Waterville, O.....	3d Best.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Collection Ten Varieties Dessert, Culinary and Market Qualities Equally Considered.	8 00
H. Burkholder.....	Clyde, O.....	2d Best.....	5 00
E. G. Cox.....	Proctorville, O.....	3d Best.....	3 00
U. T. Cox.....	Proctorville, O.....	Best Plate Arch Duke.....	2 00
H. Burkholder.....	Clyde, O.....	2d Best.....	1 00
H. Burkholder.....	Clyde, O.....	Best Plate Bradshaw.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
Mabel Hutchinson..	Clyde, O.....	Best Plate Burbank.....	2 00
Fred Hutchinson..	Clyde, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Coe's Golden Drop.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Duane's Purple.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Fellamburg.....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate French Damson.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Grand Duke.....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Gnell.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate German Prune.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Lombard.....	2 00
H. Burkholder.....	Clyde, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Monarch.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
Plums—Concluded.			
Mrs. T. S. Johnson.	Port Clinton, O., R. 1	Best Plate Moore's Arctic.....	\$2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Pond's Seedling.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Reine Claude.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Richland.....	2 00
W. H. West.....	Chillicothe, O.....	Best Plate Shropshire.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
E. G. Cox.....	Proctorville, O.....	Best Plate Stanton.....	2 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Union Purple.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Wickson.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Yellow Egg.....	2 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	2d Best.....	1 00

## PEARS.

Name of Owner.	Postoffice.	Awards.	Amount.
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Three Varieties Summer...	\$3 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	2 00
R. A. Gill.....	Port Clinton, O.....	3d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Three Varieties Fall.....	3 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	2 00
J. P. Eaton.....	Proctorville, O.....	3d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Three Varieties Winter...	3 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	2 00
C. W. Counter.....	Toledo, O.....	3d Best.....	1 00
G. H. Schmitkons...	Lorain, O., R. R. 2.	Best Five Varieties, Dessert and Culinary Qualities Considered.	5 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	3 00
C. W. Counter.....	Toledo, O.....	3d Best.....	2 00
U. T. Cox.....	Proctorville, O.....	Best Five Varieties, Market Qualities Considered.....	5 00
G. H. Schmitkons...	Lorain, O., R. R. 2.	2d Best.....	3 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	3d Best.....	2 00
C. W. Counter.....	Toledo, O.....	Best Collection Fifteen Varieties, Dessert, Culinary and Market Qualities Considered.....	12 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	8 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	3d Best.....	5 00
U. T. Cox.....	Proctorville, O.....	Best Plate Anjou.....	2 00
E. G. Cox.....	Proctorville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Bartlett.....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00
Mabel Hutchinson..	Clyde, O.....	Best Plate Beurre Bose.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Beurre Clairgeau...	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Buffam.....	2 00
H. Burkholder.....	Clyde, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Clapp's Favorite.....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Doyenne Boussock...	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
Mabel Hutchinson..	Clyde, O.....	Best Plate Duchess.....	2 00
U. T. Cox.....	Proctorville, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Flemish Beauty.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Frederick Clapp.....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
U. T. Cox.....	Proctorville, O.....	Best Plate Howell.....	2 00
W. W. Farnsworth..	Waterville, O.....	2d Best.....	1 00
H. C. Kiefaber.....	Frankfort, O.....	Best Plate Keiffer.....	2 00
Moses A. Hagler....	Xenia, O., Box 69.	2d Best.....	1 00
Mrs. T. S. Johnson..	Port Clinton, O., R. 1	Best Plate Kirtland.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
W. W. Farnsworth..	Waterville, O.....	Best Plate Lawrence.....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
G. H. Schmitkons...	Lorain, O., R. R. 2.	Best Plate Louise Bonne.....	2 00
Mabel Hutchinson..	Clyde, O.....	2d Best.....	1 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
Pears—Concluded.			
U. T. Cox.....	Proctorville, O.....	Best Plate Seckel.....	\$2 00
H. C. Kiefaber.....	Frankfort, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Sheldon.....	2 00
Mrs. T. S. Johnson.....	Port Clinton, O., R. 1	2d Best.....	1 00
Fred Hutchinson.....	Clyde, O.....	Best Plate Tyson.....	2 00
Mabel Hutchinson.....	Clyde, O.....	2d Best.....	1 00
R. A. Gill.....	Port Clinton, O.....	Best Plate Vermont Beauty.....	2 00
Mrs. T. S. Johnson.....	Port Clinton, O., R. 1	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Winter Nellis.....	2 00
W. W. Farnsworth.....	Waterville, O.....	2d Best.....	1 00

## GRAPES.

Name of Owner.	Postoffice.	Awards.	Amount.
Carey W. Montgomery.....	Newark, O.....	Best Six Varieties, Table Qualities Considered.....	\$5 00
W. H. West.....	Chillicothe, O.....	2d Best.....	3 00
Martha A. Montgomery.....	Newark, O.....	3d Best.....	2 00
Martha A. Montgomery.....	Newark, O.....	Best Six Varieties, Market Qualities Considered.....	5 00
Carey W. Montgomery.....	Newark, O.....	2d Best.....	3 00
R. A. Gill.....	Port Clinton, O.....	3d Best Six Varieties, Market Qualities Considered.....	2 00
Carey W. Montgomery.....	Newark, O.....	Best Collection Ten Varieties....	8 00
W. H. West.....	Chillicothe, O.....	2d Best.....	5 00
R. A. Gill.....	Port Clinton, O.....	3d Best.....	3 00
W. H. West.....	Chillicothe.....	Best Collection Twenty Varieties	12 00
Carey W. Montgomery.....	Newark, O.....	2d Best.....	10 00
R. A. Gill.....	Port Clinton, O.....	3d Best.....	5 00
Carey W. Montgomery.....	Newark, O.....	Best Plate Brighton.....	2 00
Martha A. Montgomery.....	Newark, O.....	2d Best.....	1 00
Carey W. Montgomery.....	Newark, O.....	Best Plate Brilliant.....	2 00
Martha A. Montgomery.....	Newark, O.....	2d Best.....	1 00
W. H. West.....	Chillicothe, O.....	Best Plate Campbell's Early....	2 00
C. W. Counter.....	Toledo, O.....	2d Best.....	1 00
W. H. West.....	Chillicothe, O.....	Best Plate Catawba.....	2 00
Carey W. Montgomery.....	Newark, O.....	Best Plate Concord.....	2 00
W. H. West.....	Chillicothe, O.....	2d Best.....	1 00
Carey W. Montgomery.....	Newark, O.....	Best Plate Delaware.....	2 00
Martha A. Montgomery.....	Newark, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Eaton.....	2 00
W. W. Farnsworth.....	Waterville, O.....	2d Best.....	1 00
Mrs. T. S. Johnson.....	Port Clinton, O., R. 1	Best Plate Empire State.....	2 00
R. A. Gill.....	Port Clinton, O.....	2d Best.....	1 00
Martha A. Montgomery.....	Newark, O.....	Best Plate Green Mountain....	2 00
Carey W. Montgomery.....	Newark, O.....	2d Best.....	1 00
W. H. West.....	Chillicothe, O.....	Best Plate Ives.....	2 00
Mrs. T. S. Johnson.....	Port Clinton, O., R. 1	2d Best.....	1 00
W. H. West.....	Chillicothe, O.....	Best Plate Lindley.....	2 00
Carey W. Montgomery.....	Newark, O.....	2d Best.....	1 00
Carey W. Montgomery.....	Newark, O.....	Best Plate Moore's Diamond....	2 00
Martha A. Montgomery.....	Newark, O.....	2d Best.....	1 00
C. W. Counter.....	Toledo, O.....	Best Plate Moore's Early.....	2 00
Carey W. Montgomery.....	Newark, O.....	2d Best.....	1 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
Grapes—Concluded			
Carey W. Montgomery	Newark, O.	Best Plate Niagara	\$2 00
W. H. West	Chillicothe, O.	2d Best	1 00
W. H. West	Chillicothe, O.	Best Plate Norton's Virginia	2 00
Carey W. Montgomery	Newark, O.	Best Plate Pocklington	2 00
R. A. Gill	Port Clinton, O.	2d Best	1 00
Martha A. Montgomery	Newark, O.	Best Plate Salem	2 00
Carey W. Montgomery	Newark, O.	2d Best	1 00
W. H. West	Chillicothe, O.	Best Plate Wilder	2 00
Carey W. Montgomery	Newark, O.	2d Best	1 00
W. W. Farnsworth	Waterville, O.	Best Plate Woodruff Red	2 00
Carey W. Montgomery	Newark, O.	2d Best	1 00
Carey W. Montgomery	Newark, O.	Best Plate Worden	2 00
W. H. West	Chillicothe, O.	2d Best	1 00

## COUNTY FRUITS.

Name of Owner.	Postoffice.	Awards.	Amount.
R. A. Gill	Port Clinton, O.	Best County Exhibit of One Hundred Plates of Fruits of Various Kinds	\$100 00
W. W. Farnsworth	Waterville, O.	2d Best	85 00
U. T. Cox	Proctorville, O.	3d Best	65 00
Fred Hutchinson	Clyde, O.	4th Best County Exhibit of One Hundred Plates of Fruits of Various Kinds	50 00
M. I. Shively	Chillicothe, O.	5th Best	40 00
Schmitkons Bros	Loraln, O., R. R. 2	6th Best	30 00

## PLANTS AND FLOWERS.

Name of Owner.	Postoffice.	Awards.	Amount.
Decorative and Flowering Plants—Professional List.			
Livingston Seed Co.	Columbus, O.	Best Collection of Palms	\$25 00
Livingston Seed Co.	Columbus, O.	Best Single Specimen Palm	8 00
Livingston Seed Co.	Columbus, O.	Best Collection of Ferns and Lycopodium	15 00
Livingston Seed Co.	Columbus, O.	Best Collection Variegated Foliage Plants	10 00
Livingston Seed Co.	Columbus, O.	Best Collection Stove and Greenhouse Plants, Not Less Than Twenty-five, Growth, Quality and Selection of Varieties Considered	25 00
Livingston Seed Co.	Columbus, O.	Best Collection Begonias	10 00
Livingston Seed Co.	Columbus, O.	Best Collection Cannas in Bloom	10 00
Livingston Seed Co.	Columbus, O.	Best Collection Geraniums, in Bloom	10 00
Livingston Seed Co.	Columbus, O.	Best Collection Asters, in Pots	5 00
Livingston Seed Co.	Columbus, O.	Best Single Basket Filled With Plants	5 00
Livingston Seed Co.	Columbus, O.	Best Pair Vases Filled With Plants	8 00
Livingston Seed Co.	Columbus, O.	Best Pair Hanging Baskets Filled With Plants	6 00
Livingston Seed Co.	Columbus, O.	Best Porch Box, Filled With Plants	8 00
Livingston Seed Co.	Columbus, O.	Best Single Specimen Rubber Plant	8 00

## HORTICULTURAL PRODUCTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
Decorative and Flowering Plants —Professional List—Concluded.			
Livingston Seed Co.	Columbus, O.....	Best Single Specimen Asparagus Sprengeri or Plumosus.....	\$3 00
E. A. Brenneman...	Camp Chase, O.....	2d Best.....	2 00
Cut Flowers and Floral Designs —Professional List.			
Livingston Seed Co.	Columbus, O.....	Best Pair Bouquets, Any Style..	10 00
Mrs. John Howard.	Conesville, O.....	2d Best.....	5 00
Livingston Seed Co.	Columbus, O.....	Best Dining Table Vase, Twen- ty-four Inches High.....	10 00
Mrs. John Howard.	Conesville, O.....	2d Best.....	5 00
Livingston Seed Co.	Columbus, O.....	Best Dining Table Vase, Twelve Inches High.....	5 00
Livingston Seed Co.	Columbus, O.....	Best Large Festival Design.....	15 00
Livingston Seed Co.	Columbus, O.....	Best Large Funeral Design.....	25 00
Livingston Seed Co.	Columbus, O.....	Best Collection Small Designs Not Less Than Five.....	25 00
Livingston Seed Co.	Columbus, O.....	Best Display Cut Roses.....	15 00
Mrs. John Howard.	Conesville, O.....	2d Best.....	8 00
Cushman Gladiolus Co. ....	Sylvania, O.....	Best Display Cut Gladioli.....	20 00
Livingston Seed Co.	Columbus, O.....	2d Best.....	10 00
Cushman Gladiolus Co. ....	Sylvania, O.....	Best Display Cut Dahlias.....	8 00
Livingston Seed Co.	Columbus, O.....	2d Best.....	4 00
Livingston Seed Co.	Columbus, O.....	Best Display Cut Carnations...	10 00
Mrs. John Howard.	Conesville, O.....	2d Best.....	5 00
E. A. Brenneman...	Camp Chase, O.....	Best Display Cut Asters.....	10 00
Cushman Gladiolus Co. ....	Sylvania, O.....	2d Best.....	5 00
Livingston Seed Co.	Columbus, O.....	Best Display Any Other Variety Cut Flowers.....	10 00
Cushman Gladiolus Co. ....	Sylvania, O.....	2d Best.....	5 00
Livingston Seed Co.	Columbus, O.....	Best Display Water Lilies, in Tubs, Cut or Growing.....	12 00
Cushman Gladiolus Co. ....	Sylvania, O.....	2d Best.....	7 00
Livingston Seed Co.	Columbus, O.....	Best Display Cut Flowers, Not Less Than Twenty-five Va- rieties, of Six Each Shown in Vases, Properly Named and Labeled, and Not Otherwise Entered .....	20 00
Mrs. John Howard..	Conesville, O.....	2d Best.....	10 00
Decorative and Flowering Plants —Amateur List.			
Will F. Hall.....	Columbus, O., c/o Sta. A.....	Best Collection Palms.....	10 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.....	2d Best.....	8 00
Will F. Hall.....	Columbus, O., c/o Sta. A.....	Best Single Specimen Palm.....	3 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.....	2d Best.....	2 00
Will F. Hall.....	Columbus, O., c/o Sta. A.....	Best Specimen Boston Fern....	3 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.....	2d Best.....	2 00
Will F. Hall.....	Columbus, O., c/o Sta. A.....	Best Collection Stove and Green- house Plants, Growth, Quality and Selection of Varieties Con- sidered .....	10 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.....	2d Best.....	8 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.....	Best Collection Begonias.....	8 00
Will F. Hall.....	Columbus, O., c/o Sta. A.....	2d Best.....	5 00
Will F. Hall.....	Columbus, O., c/o Sta. A.....	Best Collection Cannas, in Blos- som, in Tubs, or Pots.....	5 00
Will F. Hall.....	Columbus, O., c/o Sta. A.....	Best Collection Geraniums, in Bloom .....	5 00

## HORTICULTURAL PRODUCTS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
		Cut Flowers and Floral Designs Amateur List—Concluded.	
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.	2d Best.	\$3 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Collection Asters, in Pots.	3 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.	Best Single Basket, Filled With Plants	3 00
Will F. Hall	Columbus, O., c/o Sta. A.	2d Best.	2 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.	Best Pair Hanging Baskets, Filled With Plants.	4 00
Will F. Hall	Columbus, O., c/o Sta. A.	2d Best.	2 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.	Best Porch Box, Filled With Plants	4 00
Mrs. T. H. Kennedy	Columbus, O., 394 W. 3d Ave.	Best Single Specimen Rubber Plant	2 00
Will F. Hall	Columbus, O., c/o Sta. A.	2d Best.	1 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Single Specimen Asparagus Sprenger	2 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Single Specimen Asparagus Plumosus	2 00
Lutie Riebel	Galloway, O.	Best Pair Bouquets, Any Style.	5 00
Miss A. M. Fridley	Ashville, O., R. R. 2	2d Best.	3 00
Lutie Riebel	Galloway, O.	Best Dining Table Vase, Twen- ty-four Inches High.	5 00
Miss A. M. Fridley	Ashville, O., R. R. 2	2d Best.	3 00
Lutie Riebel	Galloway, O.	Best Dining Table Vase, Twelve Inches High.	3 00
Will F. Hall	Columbus, O., c/o Sta. A.	2d Best.	2 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Large Festival Design.	8 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Collection Small Designs, Not Less Than Five.	8 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Display Cut Roses.	5 00
Will F. Hall	Columbus, O., c/o Sta. A.	2d Best Display Cut Gladioli.	3 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Display Cut Dahlies.	3 00
Lutie Riebel	Galloway, O.	Best Display Cut Asters.	3 00
Will F. Hall	Columbus, O., c/o Sta. A.	2d Best.	2 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Display Any Other Va- riety Cut Flowers.	3 00
Will F. Hall	Columbus, O., c/o Sta. A.	Best Display Cut Flowers, Not Less Than Twenty-five Varie- ties of Six Each Shown in Vases, Properly Named and Labeled and Not Otherwise Entered	10 00



## ELEVENTH DEPARTMENT—WOMAN'S WORK

T. E. CROMLEY, Member in Charge.

J. L. CARPENTER.....Superintendent  
 Mrs. N. T. CONNELL.....Assistant Superintendent  
 MRS. AMY C. NICKERSON.....Assistant Superintendent

## JUDGES.

FLORENCE B. ANDERSON, GEORGIE LEIGHTNER NORTON,  
 MRS. ANNA MAHER, MRS. F. J. PETERS,  
 FON ALTSTAETTER.

Received for care of exhibits and space, 1909.....\$95 00  
 Paid superintendents, judges, etc.....1,247 83  
 Premiums offered, 1909.....1,639 50  
 Premiums paid, 1909.....1,642 50

Received for care of exhibits and space, 1908.....\$96 50  
 Paid superintendents, judges, etc., 1908.....615 10  
 Premiums offered, 1908.....1,416 00  
 Premiums paid, 1908.....1,346 50

## TEXTILE FABRICS AND DOMESTIC MANUFACTURE.

Name of Owner.	Postoffice.	Awards.	Amount.
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## HOUSEHOLD FABRICS—AMATEUR.

Mrs. Louise Bonner.....	Marion, O.....	Best Silk Quilt.....	\$3 00
Mrs. Frank L. Oyler.....	Columbus, O.....	2d Best.....	2 00
Elizabeth Leigh.....	Groveport, O.....	Best Japanese Quilt (crazy).....	2 00
Maud C. Hinsey.....	Pekin, Illinois.....	2d Best.....	2 00
Mrs. R. M. Colley.....	Columbus, O.....	Best Worsted Quilt.....	2 00
Mary A. Stewart.....	Jacksontown, O.....	2d Best.....	1 00
Grace B. Matson.....	Ashtabula, O.....	Best Log Cabin Quilt.....	2 00
Mrs. N. H. Jennings.....	Cincinnati, O.....	2d Best.....	1 00
Amelia D. Covault.....	Mechanicsburg, O.....	Best White Quilt.....	2 00
Mrs. W. H. Covault.....	Mechanicsburg, O.....	2d Best.....	1 00
Gertrude George.....	Columbus, O.....	Best Calico Patchwork Quilt.....	2 00
Mrs. W. A. Himmiger.....	Marion, O.....	2d Best.....	1 00
Mrs. S. A. Watson.....	Springfield, Ill.....	Best Cradle Quilt, Calico.....	2 00
Miss M. Johnson.....	Dayton, O.....	2d Best.....	1 00
Mrs. E. Buck.....	Lockland, O.....	Best Cradle Quilt, Silk.....	2 00
Mrs. O. J. Miller.....	Mt. Gilead, O.....	Best Specimen Quilting.....	2 00
Mrs. L. C. Covault.....	Mechanicsburg, O.....	2d Best.....	1 00
Miss C. Himmiger.....	Marion, O.....	Best Silk Comfort.....	2 00
Mrs. W. A. Himmiger.....	Marion, O.....	2d Best.....	1 00
Mrs. M. B. Clutter.....	Pataskala, O., R. D. 3.....	Best Worsted Comfort.....	2 00
Mary A. Stewart.....	Jacksontown, O.....	2d Best.....	1 00
Louise Zumkeller.....	Dayton, Ky.....	Best Handmade Rug.....	2 00
Bertha C. Meyers.....	Columbus, O.....	2d Best.....	1 00
Mrs. Louise Bonner.....	Marion, O.....	Best Rug on Burlap.....	2 00
Louise Zumkeller.....	Dayton, Ky.....	2d Best.....	1 00
Grace B. Matson.....	Ashtabula, O.....	Best Woven Portiers.....	3 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	2 00
Mary A. Stewart.....	Jacksontown, O.....	Best Ten Yards Rag Carpet.....	3 00
Grace B. Matson.....	Ashtabula, O.....	2d Best.....	2 00

## KNITTING—AMATEUR.

Maud C. Hinsey.....	Pekin, Illinois.....	Best Pair Silk Stockings.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Mrs. C. E. Broseman.....	Columbus, O.....	Best Pair Silk Socks.....	2 00
Mrs. Laura Gregg.....	Washington C. H., O.....	2d Best.....	1 00
Mrs. Laura Gregg.....	Washington C. H., O.....	Best Pair Woolen Stockings.....	2 00
Maude C. Hinsey.....	Pekin, Ill.....	2d Best.....	1 00
Mrs. M. B. Clutter.....	Pataskala, O.....	Best Pair Woolen Socks.....	2 00
Mrs. N. H. Jennings.....	Cincinnati, O.....	2d Best.....	1 00
Maud C. Hinsey.....	Pekin, Ill.....	Best Pair Golf Stockings.....	2 00
Mrs. Ed. Greiner.....	Delaware, O.....	2d Best.....	1 00
Mrs. L. C. Huckstep.....	Bowling Green, Mo.....	Best Pair Golf Gloves.....	2 00
Iulu Cissna.....	Washington C. H., O.....	2d Best.....	1 00
Mrs. O. J. Miller.....	Mt. Gilead, O.....	Best Pair Silk Mittens.....	2 00
Maud C. Hinsey.....	Pekin, Ill.....	2d Best.....	1 00
Anna Shotts.....	Columbus, O.....	Best Pair Woolen Mittens.....	2 00
Mrs. L. C. Huckstep.....	Bowling Green, Mo.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
KNITTING—AMATEUR—Concluded.			
Miss Mattie Hall....	Lexington, Ky.....	Best Pair Slippers.....	\$2 00
Mrs. L. C. Huckstep	Bowling Green, Mo.	2d Best.....	1 00
Mrs. J. W. Parker....	Delaware, O.....	Best Ladies' Sweater.....	2 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. W. H. Covault....	Mechanicsburg, O....	Best Shawl, Large.....	2 00
Mrs. Louise Bonner....	Marion, O.....	2d Best.....	1 00
Mrs. Nora Patrick....	Columbus, O.....	Best Bed Spread.....	2 00
Amella D. Covault....	Mechanicsburg, O....	2d Best.....	1 00
Estella C. Smith....	Marion, O.....	Best Afghan, Large.....	3 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	2 00
Mrs. W. H. Covault....	Mechanicsburg, O....	Best Woolen Lace, Two Yards..	2 00
Mrs. W. H. Covault....	Mechanicsburg, O....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Cotton Lace, Two Yards..	2 00
Amella D. Covault....	Mechanicsburg, O....	2d Best.....	1 00
Mrs. L. C. Covault....	Mechanicsburg, O....	Best Display, Five Pieces.....	3 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	2 00

## CROCHET WORK—AMATEUR.

Mrs. S. A. Watson....	Springfield, Ill.....	Best Pair Slippers.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. E. Black.....	Lockland, O.....	Best Ladies' Skirt.....	2 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	1 00
Grace B. Matson....	Ashtabula, O.....	Best Shawl, Large.....	2 00
Sarah E. Miller.....	Mansfield, O.....	2d Best.....	1 00
Mrs. E. Buck.....	Lockland, O.....	Best Infant's Hood.....	1 00
Mrs. S. S. Watson....	Springfield, Ill.....	2d Best.....	50
Miss Mattie Hall....	Lexington, Ky.....	Best Infant's Sacque.....	1 00
Miss Janette Oppen-	Marion, O.....	2d Best.....	50
helter	Lockland, O.....	Best Infant's Skirt.....	1 00
Mrs. E. Buck.....	Ashtabula, O.....	2d Best.....	50
Grace B. Matson....	Norwood, O.....	Best Table Mats, Cotton.....	1 00
Mrs. L. P. Warman....	Dayton, O.....	2d Best.....	50
Miss M. Johnson....	Lexington, Ky.....	Best Dollies, Six.....	1 00
Miss Mattie Hall....	Mechanicsburg, O....	2d Best.....	50
Mrs. W. H. Covault....	Mechanicsburg, O....	Best Woolen Lace, Two Yds..	1 00
Amella D. Covault....	West Mansfield, O..	2d Best.....	50
Inez Plotner.....	Lexington, Ky.....	Best Cotton Lace, Two Yards..	1 00
Miss Mattie Hall....	Mechanicsburg, O....	2d Best.....	50
Mrs. W. H. Covault....	Mechanicsburg, O....	Best Irish Crochet Lace, 2 Yds.	1 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	50
Mrs. G. E. Britain....	Dayton, O.....	Best Irish Crochet, Medallion..	1 00
Viola R. Fox.....	Mechanicsburg, O....	2d Best.....	50
Amella D. Covault....	Lexington, Ky.....	Best Afghan, Large.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Afghan, Small.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	50
Mrs. J. W. Parker....	Delaware, O.....	Best Bed Spread.....	2 00
Mrs. F. C. Grice....	Columbus, O.....		
Miss Janette Oppen-	Marion, O.....	2d Best.....	1 00
helter	Delaware, O.....	Best Display, Five Pieces.....	3 00
Mrs. J. W. Parker....	Columbus, O.....	2d Best.....	2 00
Caroline G. Ackley..			

## HAND NEEDLEWORK—AMATEUR.

Mrs. A. M. Miller....	Washington C. H., O.	Best Pair Pillow Cases.....	2 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	2d Best.....	1 00
I. V. Johnson.....	Dayton, O.....	Best Pair Sheets.....	2 00
Mrs. R. P. Hain....	Columbus, O.....	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Sofa Pillow.....	2 00
Mrs. J. C. I. Jennings	Cincinnati, O.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Ladies' Waist.....	3 00
Mrs. W. H. Covault....	Mechanicsburg, O....	2d Best.....	2 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Ladies' Dressing Jacket..	3 00
Minnie Downey....	Newark, O.....	2d Best.....	2 00
Mrs. E. Buck.....	Lockland, O.....	Best Suit Underwear, 3 Pieces..	3 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	2 00
Mrs. L. P. Warman....	Norwood, O.....	Best Night Dress.....	2 00
Minnie Downey....	Newark, O.....	2d Best.....	1 00
Mrs. L. P. Worman....	Norwood, O.....	Best Chemise.....	2 00
Lulu Cissna.....	Washington C. H., O.	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	Best Skirt.....	2 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Short Underskirt.....	2 00
Minnie Downey....	Newark, O.....	2d Best.....	1 00
Mrs. Nora Patrick....	Columbus, O.....	Best Corset Cover.....	2 00
Minnie Downey....	Newark, O.....	2d Best.....	1 00
Miss Orpha Biggs....	Findlay, O.....	Best Infant's Robe and Skirt..	2 00
Miss Jennie Boyer..	Dayton, O.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
HAND NEEDLEWORK—AMATEUR—Concluded.			
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Fancy Apron.....	\$2 00
Maud C. Hinsey.....	Pekin, Ill.....	2d Best.....	1 00
Mrs. N. H. Jennings	Cincinnati, O.....	Best Jabot.....	2 00
Miss Orpha Biggs...	Findlay, O.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Specimen.....	2 00
Mrs. Laura Gregg...	Washington C. H., O.	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Display, Five Pieces.....	5 00
Mrs. Nora Patrick...	Columbus, O.....	2d Best.....	3 00

## MACHINE SEWING—AMATEUR.

Mrs. N. H. Jennings.	Cincinnati, O.....	Best Suit Underwear, 3 Pieces.	2 00
Mrs. J. W. Wilson...	Norwood, O.....	2d Best.....	1 00
Mrs. N. H. Jennings.	Cincinnati, O.....	Best Night Dress.....	1 00
Mrs. L. P. Warman...	Norwood, O.....	2d Best.....	50
Mrs. L. P. Warman...	Norwood, O.....	Best Corset Cover.....	1 00
Miss Ruth Bowman...	Columbus, O.....	2d Best.....	50
Ivy Gearhart.....	Van Wert, O.....	Best Short Underskirt.....	1 00
Mrs. N. H. Jennings.	Cincinnati, O.....	2d Best.....	50
Mrs. S. A. Watson...	Springfield, Ill.....	Best Skirt.....	1 00
Mrs. L. P. Warman...	Norwood, O.....	2d Best.....	50
Mrs. W. H. Covault...	Mechanicsburg, O.....	Best Ladies' Dress, Cotton, Pl'n	2 00
Amella D. Covault...	Mechanicsburg, O.....	2d Best.....	1 00
Miss Ruth Bowman...	Columbus, O.....	Best Ladies' Dress, Cotton, Fancy	2 00
Mrs. J. W. Parker...	Delaware, O.....	2d Best.....	1 00
Mrs. G. E. Brittain...	Dayton, O.....	Best Dressing Jacket, Cotton, Plain.....	2 00
Mrs. B. F. Sampson.	Columbus, O.....	2d Best.....	1 00
Mrs. J. W. Wilson...	Norwood, O.....	Best Dressing Jacket, Cotton, Fancy.....	2 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	1 00
Mrs. L. P. Warman...	Norwood, O.....	Best Fancy Apron.....	1 00
Louise Zumkeller...	Dayton, Ky.....	2d Best.....	50
Mrs. L. P. Warman...	Norwood, O.....	Best Night Shirt.....	1 00
Mrs. J. W. Wilson...	Norwood, O.....	2d Best.....	50
Grace B. Matson...	Ashtabula, O.....	Best Pajamas.....	1 00
Mrs. L. P. Warman...	Norwood, O.....	Best Specimen.....	1 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	50
Mrs. N. H. Jennings	Cincinnati, O.....	Best Display, Five Pieces.....	3 00
Mrs. L. P. Warman...	Norwood, O.....	2d Best.....	2 00

## CHILDREN'S CLASS.

## SPECIMEN WORK.

Blanche Baxter.....	Pekin, Ill.....	Best Outline Embroidery.....	1 00
Ethe Wilson.....	Norwood, O.....	2d Best.....	50
Blanche Baxter.....	Pekin, Ill.....	Best Silk Embroidery.....	1 00
Helen Wilson.....	Dayton, O.....	2d Best.....	50
Blanche Baxter.....	Pekin, Ill.....	Best Cotton Embroidery.....	1 00
May Jennings.....	Cincinnati, O.....	2d Best.....	50
Florence Parker...	Columbus, O.....	Best Cross Stitch Embroidery.....	1 00
Helen Wilson.....	Dayton, O.....	2d Best.....	50
Ethe Wilson.....	Norwood, O.....	Best Drawn Work.....	1 00
Helen Wilson.....	Dayton, O.....	2d Best.....	50
Helen Dorn.....	Columbus, O.....	Best Plain Sewing.....	1 00
Blanche Baxter.....	Pekin, Ill.....	2d Best.....	50
Helen Wilson.....	Dayton, O.....	Best Knitting.....	1 00
Blanche Baxter.....	Pekin, Ill.....	2d Best.....	50
Blanche Baxter.....	Pekin, Ill.....	Best Crocheting.....	1 00
Anna Johnson.....	Dayton, O.....	2d Best.....	50
May Jennings.....	Cincinnati, O.....	Best Pyrography.....	1 00
Helen Wilson.....	Dayton, O.....	2d Best.....	50
Anna Johnson.....	Dayton, O.....	Best Stencil on Fabric.....	1 00
Dorris V. Hall.....	Columbus, O., Sta. A	2d Best.....	50
Katharine Gugel...	Dayton, O.....	Best Water Color.....	1 00
May Jennings.....	Cincinnati, O.....	2d Best.....	50
Anna Johnson.....	Dayton, O.....	Best Pencil Drawing.....	1 00
Katharine Gugel...	Dayton, O.....	2d Best.....	50
Dorris V. Hall.....	Columbus, O.....	Best Wood Carving.....	1 00
Helen Wilson.....	Dayton, O.....	Best Basketry.....	1 00
Anna Johnson.....	Dayton, O.....	2d Best.....	50

## \*CROSS-STITCH EMBROIDERY—AMATEUR.

Mrs. E. Buck.....	Lockland, O.....	Best Table Cover.....	2 00
Mrs. R. P. Hain.....	Columbus, O.....	2d Best.....	1 00
Miss Mattie Hall...	Lexington, Ky.....	Best Sofa Pillow.....	2 00
Maud C. Hinsey.....	Pekin, Ill.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
CROSS-STITCH EMBROIDERY—AMATEUR—Concluded.			
Miss Jennie Boyer..	Dayton, O.....	Best Pin Cushion.....	\$2 00
Mrs. G. A. King....	Dayton, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Book Cover.....	2 00
Mrs. G. A. King....	Dayton, O.....	Best Fancy Bag.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	Best Shirt Waist Set.....	2 00
Miss M. Johnson....	Dayton, O.....	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	Best Specimen.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. L. P. Warman..	Norwood, O.....	Best Display, Five Pieces.....	3 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	2 00

## COTTON OR LINEN EMBROIDERY—AMATEUR.

Hazel Human.....	Sedalia, Mo.....	Best Pair Pillow Cases.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Grace B. Matson....	Ashtabula, O.....	Best Pair Sheets.....	2 00
Mrs. Louise Bonner..	Marion, O.....	2d Best.....	1 00
Hazel Human.....	Sedalia, Mo.....	Best Table Cloth.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	Best Dinner Napkins, Twelve..	2 00
Hazel Human.....	Sedalia, Mo.....	2d Best.....	1 00
Sarah E. Miller....	Mansfield, O.....	Best Lunch Cloth.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	Best Centerpiece.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Doilies, Six.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Tray Cloth.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. A. M. Miller....	Washington C. H., O.	Best Sideboard Cover.....	2 00
Mrs. J. W. Parker..	Delaware, O.....	2d Best.....	1 00
Hazel Human.....	Sedalia, Mo.....	Best Pair Towels.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Mrs. R. P. Hahn....	Columbus, O.....	Best Monogram.....	2 00
Hazel Human.....	Sedalia, O.....	2d Best.....	1 00
Miss L. M. Nickerson	Circleville, O.....	Best Ladies' Skirt.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	Best Chemise.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Corset Cover.....	2 00
Mrs. W. H. Covault..	Mechanicsburg, O...	2d Best.....	1 00
Hazel Human.....	Sedalia, Mo.....	Best Shirt Waist.....	3 00
Miss L. M. Nickerson	Circleville, O.....	2d Best.....	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	Best Shirt Waist Set.....	2 00
Minnie Downey....	Newark, O.....	2d Best.....	1 00
Mrs. L. C. Covault..	Mechanicsburg, O...	Best Infant's Cap.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Specimen.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Mrs. G. A. King....	Dayton, O.....	Best Specimen Shadow Emb.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. G. A. King....	Dayton, O.....	Best Specimen French Emb.....	2 00
Mrs. G. A. King....	Dayton, O.....	2d Best.....	1 00
Mrs. J. W. Parker..	Delaware, O.....	Best Specimen Bermuda Bag.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Hazel Human.....	Sedalia, Mo.....	Best Spec. Mountmellick Emb.....	2 00
Mrs. J. W. Parker..	Delaware, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Specimen Hedebo Emb.....	2 00
Amelia D. Covault..	Mechanicsburg, O...	2d Best.....	1 00
Miss M. Johnson....	Dayton, O.....	Best Specimen Cut Work Emb.....	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Specimen Coronation Emb.....	2 00
Mrs. L. C. Covault..	Mechanicsburg, O...	2d Best.....	1 00
Mrs. W. H. Covault..	Mechanicsburg, O...	Best Specimen Ajour Emb.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. J. W. Parker..	Delaware, O.....	Best Specimen Wallachian Emb.....	2 00
Mrs. J. W. Wilson..	Norwood, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Spec. German Spachtel Emb.....	2 00
Mrs. J. W. Wilson..	Norwood, O.....	Best Specimen Lazy Daisies.....	2 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	1 00
Mrs. L. C. Covault..	Mechanicsburg, O...	Best Specimen Gittertyl.....	2 00
Amelia D. Covault..	Mechanicsburg, O...	2d Best.....	1 00
Mrs. R. P. Hahn....	Columbus, O.....	Best Display, Five Pieces.....	3 00
Miss Florence Sacket	Columbus, O.....	2d Best.....	2 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>EYELET EMBROIDERY—AMATEUR.</b>			
Sarah E. Miller.....	Mansfield, O.....	Best Centerpiece .....	\$2 00
Mrs. J. W. Parker....	Delaware, O.....	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Dollies, Six.....	2 00
Mrs. J. C. L. Jennings	Cincinnati, O.....	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Shirt Waist.....	2 00
Mrs. Ed. Greiner.....	Delaware, O.....	2d Best.....	1 00
Mrs. C. F. Young.....	Columbus, O.....	Best Corset Cover.....	2 00
Mrs. L. C. Covault....	Mechanicsburg, O...	2d Best.....	1 00
Mrs. G. A. King.....	Dayton, O.....	Best Collar and Cuffs...	2 00
Miss M. Johnson.....	Dayton, O.....	2d Best.....	1 00
Miss Mattie Hall.....	Lexington, Ky.....	Best Large Collar.....	2 00
Mrs. J. C. L. Jennings	Cincinnati, O.....	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Sofa Pillow.....	2 00
Mrs. J. W. Parker....	Delaware, O.....	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Parasol.....	2 00
Mrs. Geo. W. Hatfield	Troy, O.....	2d Best.....	1 00
Amelia D. Covault....	Mechanicsburg, O...	Best Hat.....	2 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	1 00
Miss Mattie Hall.....	Lexington, Ky.....	Best Specimen.....	2 00
Charlotte M. Harris..	Springfield, O.....	2d Best.....	1 00
Mrs. C. C. Weekly....	Highland, W. Va....	2d Best Display, Five Pieces...	2 00

## HARDINGER EMBROIDERY—AMATEUR.

Ivy Gearhart.....	Van Wert, O.....	2d Best Shirt Waist.....	1 00
Mrs. B. S. Fleming....	Hanover, O.....	Best Dresser Cover.....	2 00
Mrs. Clara Fogle.....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. W. H. Covault...	Mechanicsburg, O...	Best Centerpiece.....	2 00
Mrs. Clara Fogle.....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. E. J. Flauntt....	Columbus, O.....	Best Table Cover.....	2 00
Miss Corrine Birk-			
enbach .....	Columbus, O.....	2d Best.....	1 00
Miss L. M. Davidson	Columbus, O.....	Best Couch Pillow.....	2 00
Mrs. E. J. Flauntt....	Columbus, O.....	2d Best.....	1 00
Mrs. L. C. Covault...	Mechanicsburg, O...	Best Collar and Cuffs...	2 00
Mrs. E. L. Graham....	Columbus, O.....	2d Best.....	1 00
Mrs. L. P. Warman....	Norwood, O.....	Best specimen.....	2 00
Miss A. M. Koerner..	Columbus, O.....	2d Best.....	1 00

## DRAWN WORK—AMATEUR. -

Miss Carrie Himmiger	Marion, O.....	Best Table Cloth.....	2 00
Mrs. C. C. Weekly....	Highland, Va.....	2d Best.....	1 00
Miss Orpha Biggs....	Findlay, O.....	Best Lunch Cloth.....	2 00
Mrs. B. F. Sampson...	Columbus, O.....	2d Best.....	1 00
Miss Orpha Biggs....	Findlay, O.....	Best Centerpiece.....	2 00
Mrs. B. F. Sampson...	Columbus, O.....	2d Best.....	1 00
Mrs. C. C. Weekly....	Highland, W. Va....	Best Tray Cloth.....	2 00
Miss Orpha Biggs....	Findlay, O.....	2d Best.....	1 00
Mrs. C. C. Weekly....	Highland, W. Va....	Best Six Napkins.....	2 00
Charlotte M. Harris..	Springfield, O.....	2d Best.....	1 00
Mrs. S. A. Watson....	Springfield, Ill....	Best Six Dollies.....	2 00
Mrs. C. C. Weekly....	Highland, W. Va....	2d Best.....	1 00
Mrs. J. W. Wilson....	Norwood, O.....	Best Dresser Cover.....	2 00
Miss Orpha Biggs....	Findlay, O.....	2d Best.....	1 00
Miss Orpha Biggs....	Findlay, O.....	Best Sofa Pillow.....	2 00
Margaret Garver....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. S. A. Watson....	Springfield, Ill....	Best Pair Pillow Cases...	2 00
Margaret Garver....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. N. H. Jennings	Cincinnati, O.....	Best Pair Sheets.....	2 00
Mrs. C. C. Weekly....	Highland, W. Va....	2d Best.....	1 00
Mrs. Clara Fogle.....	Mt. Gilead, O.....	Best Pair Towels.....	2 00
Mrs. L. C. Covault....	Mechanicsburg, O...	2d Best.....	1 00
Maud C. Hinsey.....	Pekin, Ill.....	Best Handkerchief.....	2 00
Iulu Cissna.....	Washington C. H., O.	2d Best.....	1 00
Mrs. J. W. Parker....	Delaware, O.....	Best Ladies' Waist.....	2 00
Grace B. Matson.....	Ashtabula, O.....	2d Best.....	1 00
Miss Carrie Himmiger	Marion, O.....	Best Parasol.....	2 00
Miss Mattie Hall.....	Lexington, Ky.....	Best Specimen Hemstitching...	2 00
Mrs. Clara Fogle.....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. C. C. Weekly....	Highland, W. V....	Best Specimen Silk Thread...	2 00
Miss Orpha Biggs....	Findlay, O.....	2d Best.....	1 00
Amelia D. Covault....	Mechanicsburg, O...	Best Specimen.....	2 00
Miss Orpha Biggs....	Findlay, O.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## SILK EMBROIDERY—AMATEUR.

Miss Mattie Hall....	Lexington, Ky.....	Best Lunch Cloth.....	\$2 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	1 00
Mrs. C. F. Young....	Columbus, O.....	Best Centerpiece.....	2 00
Miss Jessie McDonald	Columbus, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Tray Cloth.....	2 00
Sarah E. Miller.....	Mansfield, O.....	2d Best.....	1 00
Mrs. N. H. Jennings	Cincinnati, O.....	Best Table Cover.....	2 00
Mrs. J. W. Shipman...	Springfield, O.....	2d Best.....	1 00
Mrs. J. C. L. Jennings	Cincinnati, O.....	Best Sideboard Cover.....	2 00
Miss Jessie McDonald	Columbus, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best six Doilies.....	2 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	2d Best.....	1 00
Miss Fannie Fern....	Groveport, O.....	Best Sofa Pillow.....	2 00
Mrs. J. W. Parker....	Delaware, O.....	2d Best.....	1 00
Mrs. Fannie Pember-			
ton	Columbus, O.....	Best Panel.....	2 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	1 00
Mrs. C. F. Young....	Columbus, O., Sta. B	Best Picture Frame.....	2 00
Mrs. Ed. Greiner....	Delaware, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Specimen Kensington Emb	2 00
Mrs. N. H. Jennings	Cincinnati, O.....	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	Best Specimen Roman Emb...	2 00
Amelia D. Covault....	Mechanicsburg, O...	2d Best.....	1 00
Mrs. E. Buck.....	Lockland, O.....	Best Specimen Delft Embroidery	2 00
Mrs. G. E. Brittain...	Dayton, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Specimen.....	2 00
Hazel Human.....	Sedalia, Mo.....	2d Best.....	1 00
Mrs. Peck.....	Columbus, O.....	Best display, Five Pieces.....	6 00

## SILK EMBROIDERY—AMATEUR—ON SILK OR WOOL.

Mrs. C. C. Weekly....	Highland, W. Va....	Best Ladies' Flannel Skirt.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best Infant's Cloak.....	1 00
Mrs. R. M. Connell...	Columbus, O.....	Best Infant's Shawl or Blanket.	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Mrs. L. C. Covault....	Mechanicsburg, O...	2d Best Spec. Ecclesiastical Emb	1 00
Mrs. R. M. Connell...	Columbus, O.....	Best Specimen.....	2 00
Mrs. S. A. Watson....	Springfield, Ill....	2d Best.....	1 00

## BATTENBERG LACE—AMATEUR.

Alice Dixon.....	Croton, O.....	Best Curtains.....	5 00
Mrs. Ed. Greiner....	Delaware, O.....	2d Best.....	3 00
Ivy Gearhart.....	Van Wert, O.....	Best Table Cover.....	3 00
Mrs. J. A. McDonald	Ironton, O.....	2d Best.....	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	Best Centerpiece.....	2 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best six doilies.....	2 00
Elizabeth Leigh....	Groveport, O.....	Best Dresser Cover.....	2 00
Miss Carrie Nusbaum	Columbus, O.....	2d Best.....	1 00
Mrs. S. A. Watson....	Springfield, Ill....	Best Bolero, Silk.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	Best Bolero, Linen.....	2 00
Miss L. M. Nickerson	Circleville, O.....	Best Large Collar, Silk.....	2 00
Hazel Human.....	Sedalia, Mo.....	Best Large Collar, Linen.....	2 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	1 00
Mrs. J. A. McDonald	Ironton, O.....	Best Parasol.....	2 00
Mrs. J. A. McDonald	Ironton, O.....	Best Medallions for Dress Garn.	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	2d Best.....	1 00
Margaret Garver....	Mt. Gilead, O.....	Best Child's Cap.....	2 00
Amelia D. Covault....	Mechanicsburg, O...	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Specimen.....	2 00
Grace B. Matson....	Ashtabula, O.....	2d Best.....	1 00

## POINT LACE—AMATEUR.

Mrs. O. J. Miller....	Mt. Gilead, O.....	Best Dress Garniture.....	2 00
Mrs. J. W. Shipman...	Springfield, O.....	2d Best.....	1 00
Mrs. E. L. Graham....	Columbus, O.....	Best Yoke.....	2 00
Mrs. B. S. Fleming....	Hanover, O.....	2d Best.....	1 00
Mrs. B. S. Fleming....	Hanover, O.....	Best Large Collar.....	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	2d Best.....	1 00
Margaret Garver....	Mt. Gilead, O.....	Best Collar and Cuffs.....	2 00
Anita Nastri.....	Columbus, O.....	2d Best.....	1 00
Margaret Garver....	Mt. Gilead, O.....	Best Tie Ends.....	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	2d Best.....	1 00
Mrs. J. W. Shipman...	Springfield, O.....	Best Handkerchief.....	2 00
Mrs. O. J. Miller....	Mt. Gilead, O.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## POINT LACE—AMATEUR—Concluded.

Hazel Human.....	Sedalia, Mo.....	Best Infant's Cap.....	\$2 00
Mrs. S. A. Watson...	Springfield, Ill.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Specimen.....	2 00
Mrs. Clara Fogle...	Mt. Gilead, O.....	2d Best.....	1 00
Margaret Garver...	Mt. Gilead, O.....	Best Specimen Point Applique...	2 00
Mrs. O. J. Miller...	Mt. Gilead, O.....	2d Best.....	1 00

## LACE AND TATTING—AMATEUR.

## Lace.

Mrs. L. P. Warman...	Norwood, O.....	Best Specimen Marie Antoinette	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Specimen Duchess.....	2 00
Maud C. Hinsey....	Pekin, Ill.....	2d Best.....	1 00
Margaret Garver...	Mt. Gilead, O.....	Best Specimen Teneriffe.....	2 00
Mrs. L. P. Warman...	Norwood, O.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Specimen Honiton.....	2 00
Mrs. O. J. Miller...	Mt. Gilead, O.....	2d Best.....	1 00
Amelia D. Covault...	Mechanicsburg, O.....	Best Specimen Bobbin.....	2 00
Mrs. L. C. Covault...	Mechanicsburg, O.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Specimen Netting.....	2 00
Mrs. J. W. Willson...	Norwood, O.....	2d Best.....	1 00

## Tatting.

Mrs. L. P. Warman...	Norwood, O.....	Best Handkerchief.....	2 00
Viola R. Fox.....	Springfield, O.....	2d Best.....	1 00
Viola R. Fox.....	Springfield, O.....	Best Tie Ends.....	2 00
Mrs. J. W. Willson...	Norwood, O.....	2d Best.....	1 00
Viola F. Fox.....	Springfield, O.....	Best Collar.....	2 00
Mrs. L. P. Warman...	Norwood, O.....	2d Best.....	1 00
Mrs. W. L. Covault...	Mechanicsburg, O.....	Best Six Dollies.....	2 00
Mrs. L. C. Covault...	Mechanicsburg, O.....	2d Best.....	1 00
Amelia D. Covault...	Mechanicsburg, O.....	2d Best Yoke.....	1 00
Miss Jennie Boyer...	Dayton, O.....	Best Specimen.....	2 00
Viola R. Fox.....	Springfield, O.....	2d Best.....	1 00

## FANCY WORK—AMATEUR.

Mrs. N. H. Jennings...	Cincinnati, O.....	Best Shirt Waist.....	2 00
Viola R. Fox.....	Springfield, O.....	2d Best.....	1 00
Mrs. L. C. Covault...	Mechanicsburg, O.....	Best Collar and Cuff Set.....	2 00
Miss Jennie Boyer...	Dayton, O.....	2d Best.....	1 00
Mrs. Clara Fogle...	Mt. Gilead, O.....	Best Ladies' Belt.....	2 00
Miss Mattie Hall...	Lexington, Ky.....	2d Best.....	1 00
Mrs. Geo. W. Hatfield	Troy, O.....	Best Three Dollies.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Mrs. E. Buck.....	Lockland, O.....	Best and Most Sensible Couch Pillow.....	2 00
Miss Jennie Boyer...	Dayton, O.....	2d Best.....	1 00
Miss Orpha Biggs...	Findlay, O.....	Best Pin Cushion.....	2 00
Hazel Human.....	Sedalia, Mo.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Couch Pillow, Fancy.....	2 00
Miss Orpha Biggs...	Findlay, O.....	2d Best.....	1 00
Charlotte M. Harris...	Springfield, O.....	Best Handkerchief Case.....	2 00
Miss Mattie Hall...	Lexington, Ky.....	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.....	Best Glove Case.....	2 00
Miss Mattie Hall...	Lexington, Ky.....	2d Best.....	1 00
Alice Ackley.....	Columbus, O.....	Best Fancy Work Bag.....	2 00
Mrs. L. P. Warman...	Norwood, O.....	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.....	Best Party Bag.....	2 00
Mrs. J. W. Parker...	Delaware, O.....	2d Best.....	1 00
Viola R. Fox.....	Springfield, O.....	Best Opera Bag.....	2 00
Emily H. Mosteller...	Newark, O.....	2d Best.....	1 00
Charlotte M. Harris...	Springfield, O.....	Best Shopping Bag.....	2 00
Mrs. G. A. King.....	Dayton, O.....	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.....	Best Laundry Bag.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.....	Best Book Cover.....	2 00
Miss M. Johnson...	Dayton, O.....	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.....	Best Magazine Cover.....	2 00
Charlotte M. Harris...	Springfield, O.....	2d Best.....	1 00
Emily H. Mosteller...	Newark, O.....	Best Scrap Basket.....	2 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
<b>ART NEEDLEWORK—AMATEUR.</b>			
Ivy Gearhart.....	Van Wert, O.....	Best Ladies' Waist.....	\$2 00
Mrs. E. L. Graham..	Columbus, O.....	2d Best.....	1 00
Viola R. Fox.....	Springfield, O.....	Best Dress Medallions.....	2 00
Mrs. N. H. Jennings.	Cincinnati, O.....	2d Best.....	1 00
Mrs. S. A. Watson..	Springfield, Ill.....	Best Stockings.....	2 00
Mrs. L. C. Covault..	Mechanicsburg, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Six Collars.....	2 00
Mrs. G. A. King.....	Dayton, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Collar and Cuffs.....	2 00
Charlotte M. Harris.	Springfield, O.....	2d Best.....	1 00
Mrs. N. H. Jennings	Cincinnati, O.....	Best Lunch Cloth.....	2 00
Minnie Downey.....	Newark, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Center Piece (24-inch).....	2 00
Charlotte M. Harris.	Springfield, O.....	2d Best.....	1 00
Minnie Downey.....	Newark, O.....	Best Center Piece (18-inch).....	2 00
Mrs. J. W. Young....	Delaware, O.....	2d Best.....	1 00
Hazel Human.....	Sedalia, Mo.....	Best Center Piece (Lace & Emb.).....	2 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	1 00
Minnie Downey.....	Newark, O.....	Best Tray Cloth.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Minnie Downey.....	Newark, O.....	Best Sideboard Cover.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Maud C. Hinsey.....	Pekin, Ill.....	Best Table Cover.....	2 00
Miss Mattie Hall....	Lexington, Ky.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Couch Pillow.....	2 00
Mrs. G. A. King.....	Dayton, O.....	2d Best.....	1 00
Miss M. Johnson.....	Dayton, O.....	Best Couch Pillow, Raffle.....	2 00
Miss Fannie Fern....	Groveport, O.....	Best Handkerchief Case.....	2 00
Viola R. Fox.....	Springfield, O.....	2d Best.....	1 00
Ivy Gearhart.....	Van Wert, O.....	Best Glove Case.....	2 00
Mrs. G. E. Brittain..	Dayton, O.....	2d Best.....	1 00
Mrs. W. H. Covault..	Mechanicsburg, O.....	Best Party Bag.....	2 00
Mrs. N. H. Jennings.	Cincinnati, O.....	2d Best.....	1 00
Viola R. Fox.....	Springfield, O.....	Best Opera Bag.....	2 00
Mrs. L. C. Covault..	Mechanicsburg, O.....	2d Best.....	1 00
Miss Fannie Fern....	Groveport, O.....	Best Shopping Bag.....	2 00
Mrs. J. W. Wilson....	Norwood, O.....	2d Best.....	1 00
Minnie Downey.....	Newark, O.....	Best Magazine Cover.....	2 00
Mrs. G. A. King.....	Dayton, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Book Cover.....	2 00
Minnie Downey.....	Newark, O.....	2d Best.....	1 00
Mrs. Ed. Greiner.....	Delaware, O.....	Best Specimen.....	2 00
Ivy Gearhart.....	Van Wert, O.....	2d Best.....	1 00
Mrs. O. J. Miller.....	Mt. Gilead, O.....	Best Specimen Bulgarian.....	2 00
Mrs. J. W. Wilson....	Norwood, O.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Specimen Bierdermeier.....	2 00
Mrs. S. A. Watson..	Springfield, Ill.....	2d Best.....	1 00
Mrs. Ed. Greiner.....	Delaware, O.....	Best Specimen Ribbon.....	2 00
Mrs. L. C. Covault..	Mechanicsburg, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Specimen Jewel.....	2 00
Mrs. E. Buck.....	Lockland, O.....	2d Best.....	1 00
Mrs. S. A. Watson..	Springfield, Ill.....	Best Specimen Roman.....	2 00
Amelia D. Covault..	Mechanicsburg, O.....	2d Best.....	1 00
Mrs. R. P. Hain.....	Columbus, O.....	Best Specimen Coronation.....	2 00
Mrs. N. H. Jennings.	Cincinnati, O.....	2d Best.....	1 00
Mrs. L. C. Covault..	Mechanicsburg, O.....	Best Specimen Featherstitch.....	2 00
Miss Fannie Fern....	Groveport, O.....	2d Best.....	1 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	Best Specimen Darned Net.....	2 00
Miss Jennie Boyer..	Dayton, O.....	2d Best.....	1 00
Maud C. Hinsey.....	Pekin, Ill.....	Best Specimen Huckaback.....	2 00
Mrs. R. P. Hain.....	Columbus, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Specimen Outline.....	2 00
Miss M. Johnson.....	Dayton, O.....	2d Best.....	1 00
Maud C. Hinsey.....	Pekin, Ill.....	Best Specimen Net Applique.....	2 00
Mrs. J. W. Wilson....	Norwood, O.....	2d Best.....	1 00
Miss Mattie Hall....	Lexington, Ky.....	Best Display Ten Finished Pieces.....	10 00
Mrs. Clara Fogle....	Mt. Gilead, O.....	2d Best.....	5 00
<b>DECORATIVE WORK—AMATEUR.</b>			
Mrs. Winifred Holton	Springfield, O.....	Best Picture Frame.....	2 00
Mrs. J. W. Young....	Delaware, O.....	2d Best.....	1 00
Virginia Wiltberger.	Columbus, O.....	Best Couch Pillow.....	2 00
Mrs. Anna W. Russell	Springfield, O.....	2d Best.....	1 00
Miss M. Johnson.....	Dayton, O.....	Best Handkerchief Case or Box.....	2 00
Charlotte M. Harris.	Springfield, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Glove Case or Box.....	2 00
Mrs. A. M. Miller.....	Washington C. H., O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Jewel Case or Chest.....	2 00
Eva B. Mosteller....	Newark, O.....	2d Best.....	1 00



## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## DECORATIVE WORK—AMATEUR—Concluded.

Miss Alice Kunkel...	Greenville, O.....	Best Book Cover.....	\$2 00
Mrs. Anna W. Russell	Springfield, O.....	2d Best.....	1 00
Miss Alice Kunkel...	Greenville, O.....	Best Magazine Cover.....	2 00
Mrs. G. A. King.....	Dayton, O.....	2d Best.....	1 00
Mrs. Anna W. Russell	Springfield, O.....	Best Photograph Case.....	2 00
Eva B. Mosteller...	Newark, O.....	2d Best.....	1 00
Miss Alice Kunkel...	Greenville, O.....	Best Blotting Pad.....	2 00
Charlotte M. Harris...	Springfield, O.....	2d Best.....	1 00
Miss Alice Kunkel...	Greenville, O.....	Best Opera Bag.....	2 00
Mrs. Anna W. Russell	Springfield, O.....	2d Best.....	1 00
Miss Alice Kunkel...	Greenville, O.....	Best Shopping Bag.....	2 00
Mrs. Winifred Holton	Springfield, O.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, O.....	Best Stencil on Fabric.....	2 00
Hester C. Harris...	Springfield, O.....	2d Best.....	1 00
Hester C. Harris...	Springfield, O.....	Best Stencil on Wood.....	2 00
Mrs. C. Augustus...	Columbus, O.....	Best Tapestry Painting.....	3 00

## CHINA PAINTING—AMATEUR.

Karl Bolander.....	Marion, O.....	Best Chocolate Set.....	5 00
Virginia Wiltberger.	Columbus, O.....	2d Best.....	3 00
Mrs. Peck.....	Columbus, O.....	Best Ice Cream Set.....	5 00
Karl Bolander.....	Marion, O.....	2d Best.....	3 00
Virginia Wiltberger.	Columbus, O.....	Best Fish Set.....	5 00
Miss Harriet Bretz.	Sandusky, O.....	2d Best.....	3 00
Mrs. Peck.....	Columbus, O.....	Best Six Large Plates.....	5 00
Mrs. G. E. Brittain.	Dayton, O.....	2d Best.....	3 00
Mrs. A. C. Ogler.....	Columbus, O.....	Best Six Small Plates.....	5 00
Estella C. Smith.....	Marion, O.....	2d Best.....	3 00
Virginia Wiltberger.	Columbus, O.....	Best Six Cups and Saucers.....	3 00
Mrs. G. E. Brittain.	Dayton, O.....	2d Best.....	2 00
Virginia Wiltberger.	Columbus, O.....	Best Six After Dinner Coffee Cups	3 00
Karl Bolander.....	Marion, O.....	Best Six Egg Cups.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Aurelia Brown.....	Columbus, O.....	Best Tea Pot, Sugar and Cream.	3 00
J. E. Ellwanger.....	Columbus, O.....	2d Best.....	2 00
Mrs. G. E. Brittain.	Dayton, O.....	Best Chop Plate.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	Best Cake Plate.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Mrs. Peck.....	Columbus, O.....	Best Salad Dish.....	3 00
Karl Bolander.....	Marion, O.....	2d Best.....	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	Best Pitcher.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
J. E. Ellwanger.....	Columbus, O., Sta. B	Best Tankard or Claret Pitcher and Mug.....	3 00
Lulu Fuller.....	Columbus, O.....	2d Best.....	2 00
Mrs. E. L. Graham.	Columbus, O.....	Best Loving Cup.....	3 00
Karl Bolander.....	Marion, O.....	2d Best.....	2 00
J. E. Ellwanger.....	Columbus, O., Sta. B	Best Punch Bowl.....	5 00
Karl Bolander.....	Marion, O.....	2d Best.....	3 00
Lulu Fuller.....	Columbus, O.....	Best Tray.....	3 00
J. E. Ellwanger.....	Columbus, O.....	2d Best.....	2 00
Lulu Fuller.....	Columbus, O.....	Best Plaque.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Lulu Fuller.....	Columbus, O.....	Best Vase.....	5 00
Mrs. G. E. Brittain.	Dayton, O.....	2d Best.....	2 00
Mrs. Peck.....	Columbus, O.....	Best Jardiniere.....	3 00
Stella C. Smith.....	Marion, O.....	2d Best.....	2 00
Mrs. Peck.....	Columbus, O.....	Best Fern Dish.....	3 00
Karl Bolander.....	Marion, O.....	2d Best.....	2 00
Mrs. G. E. Brittain.	Dayton, O.....	Best Miniature.....	3 00
J. E. Ellwanger.....	Columbus, O., Sta. B	2d Best.....	2 00
Mrs. G. E. Brittain.	Dayton, O.....	Best Specimen Figure.....	3 00
Louise Zumkeller...	Dayton, Ky.....	2d Best.....	2 00
Lulu Fuller.....	Columbus, O.....	Best Specimen Paste Work.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Mrs. Peck.....	Columbus, O.....	Best Specimen Enamel.....	3 00
Mrs. G. E. Brittain.	Dayton, O.....	2d Best.....	2 00
Mrs. G. E. Brittain.	Dayton, O.....	Best Specimen Luster.....	3 00
Mrs. S. A. Watson.....	Springfield, Ill.....	2d Best.....	2 00
Mrs. A. C. Ogler.....	Columbus, O.....	Best Specimen Conventional.....	3 00
Karl Bolander.....	Marion, O.....	2d Best.....	2 00
Mrs. G. E. Brittain.	Dayton, O.....	Best Specimen.....	3 00
Mrs. Peck.....	Columbus, O.....	2d Best.....	2 00
Mrs. Peck.....	Columbus, O.....	Best Display, Ten Pieces.....	10 00
Mrs. G. E. Brittain.	Dayton, O.....	2d Best.....	5 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## ART NEEDLEWORK—PROFESSIONAL.

Mrs. Cora L. Creamer	Springfield, O.....	Best Table Set, Consisting of Table Center With Eight Plate Dollies and Which May be Carried Out on One Fabric....	\$7 00
Mrs. R. W. Priest...	Columbus, O.....	2d Best.....	5 00
Augusta Brodbeck...	Columbus, O.....	Best Single Specimen.....	5 00
Mrs. Cora L. Creamer	Springfield, O.....	2d Best.....	3 00
Mrs. R. W. Priest...	Columbus, O.....	Best Display, Eight Pieces.....	10 00
Mrs. Cora L. Creamer	Springfield, O.....	2d Best.....	5 00

## PYROGRAPHY—PROFESSIONAL.

Paul Frankenberg...	Shepard, O.....	Best Specimen.....	7 00
Elizabeth Freshwater	Columbus, O.....	2d Best.....	5 00
Mrs. H. T. Phillips...	Columbus, O.....	Best Display.....	10 00

## CHINA PAINTING—PROFESSIONAL.

## Other Than Figure.

Mrs. H. L. Cowser...	Columbus, O.....	Best Lemonade Pitcher.....	3 00
Mrs. Della Porter...	Columbus, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Panel.....	3 00
Mrs. John F. Kreis...	Marion, O.....	2d Best.....	2 00
Mrs. Della Porter...	Columbus, O.....	Best Plaque.....	3 00
Mrs. H. L. Cowser...	Columbus, O.....	2d Best.....	2 00
Mrs. Della Porter...	Columbus, O.....	Best Conventional Design.....	3 00
Mrs. John F. Kreis...	Marion, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Tankard or Claret Pitcher and Mug.....	3 00
Meta Earnest.....	Columbus, O.....	2d Best.....	2 00
Mrs. John F. Kreis...	Marion, O.....	Best Punch Bowl.....	3 00
Mary E. Wiltberger...	Columbus, O.....	2d Best.....	2 00
Mrs. H. L. Cowser...	Columbus, O.....	Best Vase.....	3 00
Lurah C. Davis.....	Columbus, O.....	2d Best.....	2 00
Meta Earnest.....	Columbus, O.....	Best Six Cups and Saucers.....	3 00
Mrs. J. W. Shipman...	Springfield, O.....	2d Best.....	2 00
Mary E. Wiltberger...	Columbus, O.....	Best Six Large Plates.....	3 00
Meta Earnest.....	Columbus, O.....	2d Best.....	2 00
Meta Earnest.....	Columbus, O.....	Best Six Small Plates.....	3 00
Mrs. J. W. Shipman...	Springfield, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Specimen Enamel.....	3 00
Mrs. Della Porter...	Columbus, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Specimen Paste Work.....	3 00
Mrs. J. W. Shipman...	Springfield, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Specimen Lustre.....	3 00
Mrs. Della Porter...	Columbus, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Specimen Showing Most Originality.....	3 00
Mrs. H. L. Cowser...	Columbus, O.....	2d Best.....	2 00
Lurah C. Davis.....	Columbus, O.....	Best Display, Six Pieces.....	10 00
Meta Earnest.....	Columbus, O.....	2d Best.....	5 00

## Figure Work.

Elizabeth Leigh.....	Groveport, O.....	Best Portrait.....	3 00
Mrs. John F. Kreis...	Marion, O.....	2d Best.....	2 00
Mrs. John F. Kreis...	Marion, O.....	Best Figure.....	3 00
Mrs. John F. Kreis...	Marion, O.....	Best Plaque.....	3 00
Mrs. John F. Kreis...	Marion, O.....	Best Panel.....	3 00
Miss Mint M. Hood...	Columbus, O.....	Best Vase.....	3 00
Mrs. John F. Kreis...	Marion, O.....	2d Best.....	2 00
Mrs. John F. Kreis...	Marion, O.....	Best Tankard.....	3 00
Mrs. John F. Kreis...	Marion, O.....	Best Stein.....	3 00
Miss Mint M. Hood...	Columbus, O.....	2d Best.....	2 00
Elizabeth Leigh.....	Groveport, O.....	Best Miniature.....	3 00
Miss Mint M. Hood...	Columbus, O.....	2d Best.....	2 00
Miss Mint M. Hood...	Columbus, O.....	Best Display—Six Pieces.....	10 00
Mrs. John F. Kreis...	Marion, O.....	2d Best.....	5 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
PRESERVES, PICKLES, ETC.			
Mrs. M. B. Clutter...	Pataskala, O.....	Best Canned Tomatoes.....	\$1 00
Mrs. W. A. Himmiger	Marion, O.....	2d Best.....	50
Mrs. Chas. S. Baker.	Morrow, O.....	Best Canned Blackberries.....	1 00
Mrs. Wm. Cochran..	Columbus, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Raspberries.....	1 00
Mrs. Chas. S. Baker	Morrow, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Peaches.....	1 00
Mrs. Louise Bonner.	Marion, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Pears.....	1 00
Mrs. Louise Bonner.	Marion, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Pineapples.....	1 00
Mrs. Laura Gregg...	Washington C. H., O.	2d Best.....	50
Mrs. Henry Bleber...	Delaware, O.....	Best Canned Apples.....	1 00
Mary A. Stewart....	Jacksontown, O.....	2d Best.....	50
Mrs. Henry Bleber.	Delaware, O.....	Best Canned Quinces.....	1 00
Mrs. Louise Bonner.	Marion, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Strawberries.....	1 00
Mrs. Louise Bonner.	Marion, O.....	2d Best.....	50
Mrs. John Watson...	Baltimore, O.....	Best Canned Cherries.....	1 00
Mrs. W. A. Himmiger	Marion, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Gooseberries.....	1 00
Mrs. Chas. S. Baker	Morrow, O.....	2d Best.....	50
Alvina Bothine....	Columbus, O.....	Best Canned Huckleberries.....	1 00
Mrs. W. A. Himmiger	Marion, O.....	2d Best.....	50
Mary A. Stewart....	Jacksontown, O.....	Best Canned Elderberries.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Currants.....	1 00
Mrs. W. A. Himmiger	Marion, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Grapes.....	1 00
Mrs. Chas. S. Baker.	Morrow, O.....	2d Best.....	50
Mrs. Louise Bonner.	Marion, O.....	Best Canned Plums.....	1 00
Mrs. Wm. Cochran..	Columbus, O.....	2d Best.....	50
Mrs. J. Wendell Cole	Elmwood, O.....	Best Canned Pears.....	1 00
Mrs. Henry Bleber...	Delaware, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Beans.....	1 00
Mrs. B. J. Steele....	Columbus, O.....	2d Best.....	50
Mrs. Chas. S. Baker.	Morrow, O.....	Best Canned Rhubarb.....	1 00
Mrs. W. A. Himmiger	Marion, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Canned Corn, Ear or Other	1 00
Mrs. Wm. Cochran..	Columbus, O.....	2d Best.....	50
Mrs. Henry Bleber...	Delaware, O.....	Best Blackberry Jelly.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50
Mrs. Henry Bleber...	Delaware, O.....	Best Cherry Jelly.....	1 00
Mary A. Stewart....	Jacksontown, O.....	2d Best.....	50
Mrs. Henry Bleber...	Delaware, O.....	Best Cranberry Jelly.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50
Mrs. Louise Bonner.	Marion, O.....	Best Grape Jelly.....	1 00
Miss Anna Scott....	Columbus, O.....	2d Best.....	50
H. E. Stewart....	Thornville, O.....	Best Raspberry Jelly.....	1 00
Grace B. Matson....	Ashtabula, O.....	2d Best.....	50
Mrs. C. S. Armstrong	Columbus, O.....	Best Strawberry Jelly.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50
Mrs. R. M. Connell..	Columbus, O.....	Best Apple Jelly.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	50
Grace B. Matson....	Ashtabula, O.....	Best Pear Jelly.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	50
Mrs. Wm. Cochran..	Columbus, O.....	Best Crab Apple Jelly.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	50
Grace B. Matson....	Ashtabula, O.....	Best Currant Jelly.....	1 00
Mrs. Henry Bleber.	Delaware, O.....	2d Best.....	50
Mrs. Henry Bleber.	Delaware, O.....	Best Peach Jelly.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Quince Jelly.....	1 00
Mrs. Henry Bleber...	Delaware, O.....	2d Best.....	50
Mrs. W. A. Himmiger	Marion, O.....	Best Plum Jelly.....	1 00
E. A. Brenneman...	Camp Chase, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Lemon Jelly.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	50
Mrs. W. A. Himmiger	Marion, O.....	Best Pineapple Jelly.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	50
Mrs. C. S. Armstrong	Columbus, O.....	Best Rhubarb Jelly.....	1 00
Mrs. Chas. S. Baker.	Morrow, O.....	2d Best.....	50
Miss Fannie Fern...	Groveport, O.....	Best Gooseberry Jelly.....	1 00
Mrs. R. M. Colley...	Columbus, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Preserved Quinces.....	2 00
Mrs. Henry Bleber...	Delaware, O.....	2d Best.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	Best Preserved Pears.....	2 00
Miss Minnie Bleber..	Delaware, O.....	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.....	Best Preserved Apples.....	2 00
Miss Minnie Bleber..	Delaware, O.....	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
PRESERVES, PICKLES, ETC.—Continued.			
Mrs. M. B. Clutter..	Pataskala, O.	Best Preserved Plums.....	\$2 00
Mrs. Chas. S. Baker..	Morrow, O.	2d Best.....	1 00
Mrs. B. J. Steele...	Columbus, O.	Best Preserved Cherries.....	2 00
Miss Fannie Fern...	Groveport, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Preserved Crab Apples.....	2 00
Mrs. Chas. S. Baker..	Morrow, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Preserved Grapes.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.	Best Preserved Strawberries.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Preserved Blackberries.....	2 00
Mrs. H. W. Walter...	Lancaster, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Preserved Peaches.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Preserved Currants.....	2 00
Mrs. Laura Gregg...	Washington C. H., O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Preserved Gooseberries.....	2 00
Mrs. Louise Bonner...	Marion, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Preserved Melons.....	2 00
Mrs. R. M. Colley...	Columbus, O.	2d Best.....	1 00
Mrs. Laura Gregg...	Washington C. H., O.	Best Preserved Pineapples.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Preserved Cranberries.....	2 00
H. E. Stewart.....	Thornville, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Pickled Cucumbers.....	2 00
Mrs. H. W. Walter...	Lancaster, O.	2d Best.....	1 00
Mrs. Wm. Cochran...	Columbus, O.	Best Pickled Cabbage.....	2 00
H. E. Stewart.....	Thornville, O.	2d Best.....	1 00
Mrs. B. J. Steele...	Columbus, O.	Best Pickled Beets.....	2 00
Mrs. Laura Gregg...	Washington C. H., O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Pickled Peaches.....	2 00
Mrs. W. A. Himmliger	Marion, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Pickled Pears.....	2 00
Mrs. W. A. Himmliger	Marion, O.	2d Best.....	1 00
Mrs. Chas. S. Baker..	Morrow, O.	Best Pickled Tomatoes.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Pickled Melon Mangoes.....	2 00
Mary A. Stewart...	Jacksontown, O.	2d Best.....	1 00
H. E. Stewart.....	Thornville, O.	Best Pepper Mangoes.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
H. E. Stewart.....	Thornville, O.	Best Pickled Melons.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Pickled Onions.....	2 00
Mrs. Henry Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Pickled Gherkins.....	2 00
Mrs. Henry Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Pickled Cauliflower.....	2 00
Mary A. Stewart...	Jacksontown, O.	2d Best.....	1 00
Mary A. Stewart...	Jacksontown, O.	Best Mixed Pickles.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. B. J. Steele...	Columbus, O.	Best Tomato Catsup.....	2 00
Mrs. Wm. Cochran...	Columbus, O.	2d Best.....	1 00
Mary A. Stewart...	Jacksontown, O.	Best Cucumber Catsup.....	2 00
Miss Minnie Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Cold Tomato Catsup.....	2 00
Miss Minnie Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. Louise Bonner...	Marion, O.	Best Chill Sauce.....	2 00
Miss Minnie Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. Louise Bonner...	Marion, O.	Best Chow Chow.....	2 00
Miss Minnie Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Cucumber Relish.....	1 00
Mrs. B. J. Steele...	Columbus, O.	2d Best.....	50
Mrs. M. B. Clutter...	Pataskala, O.	Best Peach Butter.....	2 00
Mrs. Laura Gregg...	Washington C. H., O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Apple Butter.....	2 00
Miss Fannie Fern...	Groveport, O.	2d Best.....	1 00
Miss Fannie Fern...	Groveport, O.	Best Quince Butter.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Tomato Butter.....	2 00
H. E. Stewart.....	Thornville, O.	2d Best.....	1 00
Mrs. Laura Gregg...	Washington C. H., O.	Best Plum Butter.....	2 00
Mrs. Chas. A. Baker..	Morrow, O.	2d Best.....	1 00
Mrs. Henry Bleber...	Delaware, O.	Best Pear Butter.....	2 00
Mrs. Chas. A. Baker..	Morrow, O.	2d Best.....	1 00
Mrs. Chas. S. Baker..	Morrow, O.	Best Grape Butter.....	2 00
Mrs. Henry Bleber...	Delaware, O.	2d Best.....	1 00
Mrs. M. B. Clutter...	Pataskala, O.	Best Peach Marmalade.....	2 00
Mrs. Henry Bleber...	Delaware, O.	2d Best.....	1 00
Miss Minnie Bleber...	Delaware, O.	Best Quince Marmalade.....	2 00
Mrs. M. B. Clutter...	Pataskala, O.	2d Best.....	1 00

## WOMAN'S WORK—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
PRESERVES, PICKLES, ETC.—Concluded.			
Mrs. Henry Bieber..	Delaware, O.....	Best Crab Apple Marmalade.....	\$2 00
H. E. Stewart.....	Thornville, O.....	2d Best.....	1 00
Viola R. Fox.....	Springfield, O.....	Best Orange Marmalade.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
Mrs. Henry Bieber..	Delaware, O.....	Best Pear Marmalade.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	Largest and Best Variety Canned Fruit.....	5 00
Mrs. Louise Bonner..	Marion, O.....	2d Best.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	Largest and Best Variety Pickles.....	5 00
Mary A. Stewart.....	Jacksontown, O.....	2d Best.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	Largest and Best Variety Jellies.....	5 00
Mrs. W. A. Himmiger	Marion, O.....	2d Best.....	3 00
Mrs. M. B. Clutter..	Pataskala, O.....	Largest & Best Variety Preserves.....	5 00
H. E. Stewart.....	Thornville, O.....	2d Best.....	3 00
Mrs. M. B. Clutter..	Pataskala, O.....	Best Display Butters, 20 Varieties.....	5 00
Mary A. Stewart.....	Jacksontown, O.....	2d Best.....	3 00
Mrs. M. B. Clutter..		Best Display Marmalades, 20 Varieties.....	5 00
		2d Best.....	3 00

## CEREAL FOODS.

Name of Owner.	Postoffice.	Awards.	Amount.
DOMESTIC BAKING.			
Laura A. Larkin....	South Charleston, O.	Best Yeast Bread.....	\$2 00
Miss Anna Scott....	Columbus, O.....	2d Best.....	1 00
Laura A. Larkin....	South Charleston, O.	Best Salt Rising Bread.....	2 00
Mrs. Louise Bonner..	Marion, O.....	2d Best.....	1 00
Mrs. Annie Smith....	Columbus, O.....	Best Corn Bread.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
H. E. Stewart.....	Thornville, O.....	Best Rye Bread.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
Mrs. Chas. C. Miller	Columbus, O.....	Best Brown Bread.....	2 00
Mrs. Louise Bonner..	Marion, O.....	2d Best.....	1 00

## LOAF CAKES.

Mrs. M. B. Clutter..	Pataskala, O.....	Best Black Fruit.....	3 00
Mary A. Stewart.....	Jacksontown, O.....	2d Best.....	2 00
H. E. Stewart.....	Thornville, O.....	Best White Fruit.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
Mrs. E. P. Wright....	Columbus, O.....	Best White Cake.....	2 00
Miss Minnie Bleber..	Delaware, O.....	2d Best.....	1 00
H. E. Stewart.....	Thornville, O.....	Best Marble Cake.....	2 00
Mrs. H. W. Walter....	Lancaster, O.....	2d Best.....	1 00
Mary A. Stewart.....	Jacksontown, O.....	Best Pound Cake.....	2 00
Mrs. Henry Bieber..	Delaware, O.....	2d Best.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	Best Coffee Cake.....	2 00
H. E. Stewart.....	Thornville, O.....	2d Best.....	1 00
Miss Carrie Himmiger	Marion, O.....	Best Nut Cake.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	Best Angel Cake.....	2 00
Mrs. C. S. Armstrong	Columbus, O.....	2d Best.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	Best Sponge Cake.....	2 00
Mrs. Henry Bieber..	Delaware, O.....	2d Best.....	1 00
Mrs. C. S. Armstrong	Columbus, O.....	Best Sunshine Cake.....	2 00
Mrs. Henry Bieber..	Delaware, O.....	2d Best.....	1 00

## LAYER CAKES.

Mrs. H. W. Walter....	Lancaster, O.....	Best Chocolate Cake.....	2 00
Anna Shotts.....	Columbus, O.....	2d Best.....	1 00
Mrs. H. W. Walter....	Lancaster, O.....	Best Caramel Cake.....	2 00
Anna Shotts.....	Columbus, O.....	2d Best.....	1 00
Mrs. H. W. Walter....	Lancaster, O.....	Best Coconut Cake.....	2 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	Best Almond Cake.....	2 00
H. E. Stewart.....	Thornville, O.....	2d Best.....	1 00
Mrs. R. A. Dale.....	Columbus, O.....	Best Devil Cake.....	2 00
Mary A. Stewart.....	Jacksontown, O.....	2d Best.....	1 00

## WOMAN'S WORK—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
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## CEREAL FOODS—Concluded.

## LAYER CAKE—Concluded.

Miss Minnie Bleber..	Delaware, O.....	Best Fig Cake.....	\$2 00
H. E. Stewart.....	Thornville, O.....	2d Best.....	1 00
Mrs. H. W. Walter..	Lancaster, O.....	Best Ribbon Cake.....	2 00
Mrs. E. P. Wright..	Columbus, O., Sta. D	2d Best.....	1 00
Mrs. H. W. Walter..	Lancaster, O.....	Best Any Other Kind Cake.....	2 00
Mrs. F. A. Tarbert..	Columbus, O.....	2d Best.....	1 00

## MISCELLANEOUS.

Mrs. M. B. Clutter..	Pataskala, O.....	Best Doz. Plain Snaps.....	1 00
Miss Grace E. Young	Columbus, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Doz. Cookies.....	1 00
Miss Grace E. Young	Columbus, O.....	2d Best.....	50
Miss Minnie Bleber..	Delaware, O.....	Best Doz. Doughnuts.....	1 00
Mrs. E. P. Wright..	Columbus, O., Sta. D	2d Best.....	50
Mrs. Louise Bonner	Marion, O.....	Best Doz. Love Fies.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	Best Doz. Ginger Snaps.....	1 00
Mrs. E. P. Wright..	Columbus, O., Sta. D	2d Best.....	50

## PIES.

Mrs. R. M. Colley..	Columbus, O.....	Best Lemon Pie.....	1 00
Mrs. Louise Bonner..	Marion, O.....	2d Best.....	50
Mrs. W. A. Himmiger	Marion, O.....	Best Mince Pie.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50
Mrs. Louise Bonner..	Marion, O.....	Best Apple Pie.....	1 00
Miss Minnie Bleber..	Delaware, O.....	2d Best.....	50
Miss Minnie Bleber..	Delaware, O.....	Best Coconut Cream.....	1 00
Mrs. Louise Bonner..	Marion, O.....	2d Best.....	50
Mrs. Louise Bonner..	Marion, O.....	Best Custard Pie.....	1 00
Mrs. Alice Dale.....	Columbus, O.....	2d Best.....	50
Mrs. E. P. Wright..	Columbus, O., Sta. D	Best Peach Pie.....	1 00
Mary A. Stewart..	Jacksontown, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Cherry Pie.....	1 00
Mrs. Henry Bleber..	Delaware, O.....	2d Best.....	50
Mrs. Henry Bleber..	Delaware, O.....	Best Blackberry Pie.....	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50

## CONFECTIONS—HOME MADE.

Miss L. M. Nickerson	Circleville, O.....	Best Pound French Creams.....	1 00
Miss Carrie Himmiger	Marion, O.....	2d Best.....	50
Miss L. M. Nickerson	Circleville, O.....	Best Pound Fudges.....	1 00
H. E. Stewart.....	Thornville, O.....	2d Best.....	50
Miss L. M. Nickerson	Circleville, O.....	Best Pound Maple Balls.....	1 00
F. J. Bartholomew..	Huntsburg, O.....	2d Best.....	50
Ethe Wilson.....	Norwood, O.....	Best Pound Chocolate Creams..	1 00
Mrs. M. B. Clutter..	Pataskala, O.....	2d Best.....	50
Miss L. M. Nickerson	Circleville, O.....	Best Pound Nut Candy.....	1 00
F. J. Bartholomew..	Huntsburg, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Pound Taffy.....	1 00
Miss Grace E. Young	Columbus, O.....	2d Best.....	50
Mrs. M. B. Clutter..	Pataskala, O.....	Best Chocolate Caramels.....	1 00
H. C. Miller.....	Akron, O.....	2d Best.....	50
Miss Carrie Himmiger	Marion, O.....	Best Candied Lemon or Orange Peel.....	1 00
Viola R. Fox.....	Springfield, O.....	2d Best.....	50
Miss Minnie Bleber..	Delaware, O.....	Best Almond Macaroons.....	1 00
Mrs. Louise Bonner	Marion, O.....	2d Best.....	50
Miss Minnie Bleber..	Delaware, O.....	Best Hickory Nut Macaroons....	1 00

## TWELFTH DEPARTMENT—FINE ARTS.

T. E. CROMLEY, Member in Charge.

HOMER SOUTHARD.....Superintendent  
 MISS MARY GODDARD.....Assistant Superintendent

MRS. J. C. SPENCER.....Judge

Paid superintendents, judges, etc..... \$190 00  
 Premiums offered, 1909..... 747 00  
 Premiums paid, 1909..... 662 00  
 Paid superintendents, judges, etc., 1908..... 114 00  
 Premiums offered, 1908..... 634 00  
 Premiums paid, 1908..... 584 00

## FINE ARTS.

Name of Owner.	Postoffice.	Awards.	Amount.
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## PYROGRAPHY AND BASKETRY—AMATEUR.

## PYROGRAPHY.

Miss Ruth Bowman.	Columbus, O.....	Best Chair.....	\$2 00
Miss Ruth Bowman.	Columbus, O.....	Best Tabourette.....	2 00
Mrs. J. W. Wilson...	Norwood, O.....	2d Best.....	1 00
Mrs. L. C. Covault...	Mechanicsburg, O.....	Best Pipe Rack.....	2 00
Charlotte M. Harris.	Springfield, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Handkerchief Box.....	2 00
Miss C. Himmiger...	Marion, O.....	2d Best.....	1 00
Eva B. Mosteller...	Newark, O.....	Best Glove Box.....	2 00
C. Fenstermacher...	Springfield, O.....	2d Best.....	1 00
Miss Ruth Bowman.	Columbus, O.....	Best Dresser Box.....	2 00
Mrs. N. H. Jennings.	Cincinnati, O.....	Best Waste Paper Box.....	2 00
Charlotte M. Harris.	Springfield, O.....	Best Jewel Chest.....	2 00
Carrie F. Mosteller.	Newark, O.....	2d Best.....	1 00
Mrs. G. E. Brittain...	Dayton, O.....	Best Etched Ideal Head.....	2 00
C. Fenstermacher...	Springfield, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Plaque.....	2 00
Mrs. J. W. Wilson...	Norwood, O.....	2d Best.....	1 00
Mrs. E. L. Graham...	Columbus, O.....	Best Panel.....	2 00
Miss Ruth Bowman.	Columbus, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Picture Frame.....	2 00
Carrie F. Mosteller.	Newark, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Nut Bowl.....	2 00
Mrs. L. P. Warman.	Norwood, O.....	2d Best.....	1 00
C. Fenstermacher...	Springfield, O.....	Best Specimen on Wood.....	2 00
Miss Ruth Bowman.	Columbus, O.....	2d Best.....	1 00
Mrs. L. C. Covault...	Mechanicsburg, O.....	Best Specimen on Leather.....	2 00
C. Fenstermacher...	Springfield, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Specimen on Velvet.....	2 00
Mrs. M. E. Earnest.	Columbus, O.....	2d Best.....	1 00
Charlotte M. Harris.	Springfield, O.....	Best Display, Five Pieces.....	6 00
Mrs. A. W. Russell.	Springfield, O.....	2d Best.....	3 00

## BASKETRY.

Mrs. S. A. Watson...	Springfield, O.....	Best Raffia Basket, Large.....	2 00
Emily H. Mosteller.	Newark, O.....	2d Best.....	1 00
Carrie F. Mosteller.	Newark, O.....	Best Raffia Basket, Small.....	2 00
Grace B. Matson....	Ashtabula, O.....	2d Best.....	1 00
Emily H. Mosteller.	Newark, O.....	Best Reed Basket.....	2 00
Burt Willard.....	Columbus, O.....	2d Best.....	1 00
Miss M. Johnson....	Dayton, O.....	Best Tray.....	2 00
Emily H. Mosteller.	Newark, O.....	2d Best.....	1 00
Emily H. Mosteller.	Newark, O.....	Best Specimen.....	2 00
Burt Willard.....	Columbus, O.....	2d Best.....	1 00

## WOOD CARVING—AMATEUR.

Mrs. N. H. Jennings.	Cincinnati, O.....	Best Tabourette.....	3 00
Mrs. Winifred Holton	Springfield, O.....	Best Sconce.....	2 00
Mrs. Winifred Holton	Springfield, O.....	Best Picture Frame.....	2 00
Mrs. R. M. Connell...	Columbus, O.....	2d Best.....	1 00

## FINE ARTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## WOOD CARVING—AMATEUR—Concluded.

Mrs. Winifred Holton	Springfield, O.....	Best Book Rack.....	\$2 00
Hester C. Harris...	Springfield, O.....	2d Best.....	1 00
Mrs. R. M. Connell...	Columbus, O.....	Best Magazine Rack.....	3 00
Mrs. Winifred Holton	Springfield, O.....	Best Specimen.....	2 00
Hester C. Harris.....	Springfield, O.....	2d Best.....	1 00
Hester C. Harris.....	Springfield, O.....	Best Display, Five Pieces.....	5 00
Miss Alice Kunkle....	Greenville, O.....	2d Best.....	3 00

## ARTS AND CRAFTS—AMATEUR.

## HAND-WROUGHT METAL.

Mrs. A. C. Ogier.....	Columbus, O.....	Best Brass Platter.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Brass Tray or Server.....	2 00
Mrs. N. H. Jennings.	Cincinnati, O.....	2d Best.....	1 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Silver Spoon.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Copper Bowl.....	2 00
Mrs. G. E. Brittain....	Dayton, O.....	2d Best.....	1 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Copper or Brass Box.....	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	Best Pair Candle Shades.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Desk Set.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Specimen Silver.....	2 00
Mrs. W. O. Schelbell..	Columbus, O.....	Best Specimen, Brass.....	2 00
Mrs. R. M. Connell....	Columbus, O.....	2d Best.....	1 00
Mrs. Winifred Holton	Springfield, O.....	Best Specimen, Copper.....	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	2d Best.....	1 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Specimen of Etching.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Display, Five Pieces.....	5 00

## JEWELRY.

Mrs. A. C. Ogier.....	Columbus, O.....	Best Ring.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Chain and Pendant.....	2 00
Mrs. E. L. Graham.....	Columbus, O.....	Best Hat Pin.....	2 00
Mrs. E. L. Graham.....	Columbus, O.....	Best Brooch.....	2 00
Mrs. A. C. Ogier.....	Columbus, O.....	2d Best.....	1 00
Mrs. A. C. Ogier.....	Columbus, O.....	Best Specimen.....	2 00

## TOOLED LEATHER.

Miss Mattie Hall.....	Lexington, Ky.....	Best Magazine Cover.....	2 00
Miss Alice Kunkel....	Greenville, O.....	2d Best.....	1 00
Miss Winifred Holton	Springfield, O.....	Best Desk Set.....	2 00
Miss Mattie Hall.....	Lexington, Ky.....	Best Table Mat.....	2 00
Miss Alice Kunkel....	Greenville, O.....	2d Best.....	1 00
Mrs. S. A. Watson.....	Springfield, Ill.....	Best Card Case.....	2 00
Miss Winifred Holton	Springfield, O.....	2d Best.....	1 00
Miss Winifred Holton	Springfield, O.....	Best Shopping Bag.....	2 00
Miss Alice Kunkel....	Greenville, O.....	2d Best.....	1 00
Miss Winifred Holton	Springfield, O.....	Best Purse.....	2 00
Miss Alice Kunkel....	Greenville, O.....	2d Best.....	1 00
Miss Mattie Hall.....	Lexington, Ky.....	Best Belt.....	2 00
Miss Alice Kunkel....	Greenville, O.....	2d Best.....	1 00
Mrs. Winifred Holton	Springfield, O.....	Best Specimen.....	2 00
Elizabeth Leigh.....	Groveport, O.....	2d Best.....	1 00
Miss Alice Kunkel....	Greenville, O.....	Best Display, Five Pieces.....	5 00

## STENCILING.

Minnie Downing.....	Newark, O.....	Best Pair Sash Window Curtains	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	2d Best.....	1 00
Karl Bolander.....	Marion, O.....	Best Table Runner.....	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	2d Best.....	1 00
Mrs. S. A. Watson.....	Springfield, Ill.....	Best Square for Table.....	2 00
Minnie Downing.....	Newark, O.....	2d Best.....	1 00
Miss Mattie Hall.....	Lexington, Ky.....	Best Pillow Top.....	2 00
Mrs. S. A. Watson.....	Springfield, Ill.....	2d Best.....	1 00
Karl Bolander.....	Marion, O.....	Best Specimen.....	2 00
Minnie Downing.....	Newark, O.....	2d Best.....	1 00
Hester C. Harris.....	Springfield, O.....	Best Display, Three Pieces.....	5 00
Minnie Downing.....	Newark, O.....	2d Best.....	3 00



## FINE ARTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## ARTS AND CRAFTS—PROFESSIONAL.

## HAND-WROUGHT METAL.

Eva B. Mosteller....	Newark, O.....	Best Brass Tray or Server.....	\$2 00
Wm. Morris Society.	Columbus, O.....	Best Silver Spoon.....	2 00
Wm. Morris Society.	Columbus, O.....	2d Best.....	1 00
Wm. Morris Society.	Columbus, O.....	Best Copper Bowl.....	2 00
A. C. Ogier.....	Columbus, O.....	2d Best.....	1 00
Carrie F. Mosteller..	Newark, O.....	Best Copper or Brass Box.....	2 00
Carrie F. Mosteller..	Newark, O.....	Best Pair Candlesticks.....	2 00
Wm. Morris Society.	Columbus, O.....	Best Lamp Shade.....	2 00
Wm. Morris Society.	Columbus, O.....	2d Best.....	1 00
Carrie F. Mosteller..	Newark, O.....	Best Desk Set.....	2 00
Rita Randall .....	Columbus, O.....	2d Best.....	1 00
Rita Randall .....	Columbus, O.....	Best Specimen, Silver.....	2 00
Rita Randall .....	Columbus, O.....	2d Best.....	1 00
Wm. Morris Society.	Columbus, O.....	Best Specimen, Brass.....	2 00
Carrie F. Mosteller..	Newark, O.....	2d Best.....	1 00
Wm. Morris Society.	Columbus, O.....	Best Specimen, Copper.....	2 00
Rita Randall .....	Columbus, O.....	2d Best.....	1 00
Eva B. Mosteller.....	Newark, O.....	Best Specimen of Etching.....	2 00
Mrs. C. N. Hunter....	Springfield, O.....	2d Best.....	1 00
Mabel Boardman....	Columbus, O.....	Best Display, Five Pieces.....	5 00
Wm. Morris Society.	Columbus, O.....	2d Best.....	3 00

## JEWELRY.

Clara L. Jones.....	Delaware, O.....	Best Ring.....	2 00
Carrie F. Mosteller..	Newark, O.....	2d Best.....	1 00
Clara L. Jones.....	Delaware, O.....	Best Bracelet.....	2 00
Carrie F. Mosteller..	Newark, O.....	Best Chain and Pendant.....	2 00
Wm. Morris Society.	Columbus, O.....	2d Best.....	1 00
Clara L. Jones.....	Delaware, O.....	Best Hat Pin.....	2 00
Carrie F. Mosteller..	Newark, O.....	2d Best.....	1 00
Clara L. Jones.....	Delaware, O.....	Best Brooch.....	2 00
Carrie F. Mosteller..	Newark, O.....	2d Best.....	1 00
Clara L. Jones.....	Newark, O.....	Best Specimen.....	2 00
Clara L. Jones.....	Newark, O.....	2d Best.....	1 00

## TOOLED LEATHER.

Eva B. Mosteller....	Newark, O.....	Best Magazine Cover.....	2 00
A. C. Ogier.....	Columbus, O.....	2d Best.....	1 00
Eva B. Mosteller....	Newark, O.....	Best Desk Set.....	2 00
A. C. Ogier.....	Columbus, O.....	2d Best.....	1 00
Carrie F. Mosteller..	Newark, O.....	Best Card Case.....	2 00
A. C. Ogier.....	Columbus, O.....	2d Best.....	1 00
Eva B. Mosteller....	Newark, O.....	Best Shopping Bag.....	2 00
A. C. Ogier.....	Columbus, O.....	2d Best.....	1 00
A. C. Ogier.....	Columbus, O.....	Best Purse.....	2 00
Carrie F. Mosteller..	Newark, O.....	2d Best.....	1 00
A. C. Ogier.....	Columbus, O.....	Best Belt.....	2 00
A. C. Ogier.....	Columbus, O.....	Best Specimen.....	2 00
A. C. Ogier.....	Columbus, O.....	Best Display, Five Pieces.....	5 00

## STENCILING.

A. C. Ogier.....	Columbus, O.....	Best Display, Three Pieces.....	5 00
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## OIL PAINTINGS.

## ORIGINAL PRODUCTIONS—OPEN TO ALL.

John N. Piersche....	Columbus, O.....	Best Portrait.....	8 00
Maud Myers.....	Round Head, O.....	2d Best.....	4 00
H. Fenstermacher....	Springfield, O.....	Best Animal Study.....	8 00
Mary W. Russell....	Springfield, O.....	2d Best.....	4 00
John N. Piersche....	Columbus, O.....	Best Full Length Figure.....	5 00
Maud Myers.....	Round Head, O.....	2d Best.....	3 00
John N. Piersche....	Columbus, O.....	Best Landscape.....	5 00
Maud Myers.....	Round Head, O.....	2d Best.....	3 00
John N. Piersche....	Columbus, O.....	Best Fruit Piece.....	5 00
Mrs. C. Augustus....	Columbus, O.....	2d Best.....	3 00
John N. Piersche....	Columbus, O.....	Best Flower Piece.....	5 00
Maud Myers.....	Round Head, O.....	2d Best.....	3 00
John N. Piersche....	Columbus, O.....	Best Still Life Study.....	5 00
H. Fenstermacher....	Springfield, O.....	2d Best.....	3 00
John N. Piersche....	Columbus, O.....	Best Exhibition Oil Paintings, Six Pieces, Not Otherwise Entered.....	15 00
Maud Myers.....	Round Head, O.....	2d Best.....	5 00

## FINE ARTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
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## WATER COLOR PAINTINGS.

John N. Piersche...	Columbus, O.....	Best Portrait.....	\$5 00
Mrs. C. N. Hunter...	Springfield, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Full Length Figure.....	4 00
Mrs. C. N. Hunter...	Springfield, O.....	2d Best.....	2 00
Maud Myers.....	Round Head, O.....	Best Landscape.....	4 00
Ferol Sibley.....	Columbus, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Fruit Piece.....	4 00
Mary E. Wiltberger...	Columbus, O.....	2d Best.....	2 00
Mary E. Wiltberger...	Columbus, O.....	Best Flower Piece.....	4 00
Ferol Sibley.....	Columbus, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Marine Study.....	4 00
Mary E. Wiltberger...	Columbus, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Still Life Study.....	4 00
Ferol Sibley.....	Columbus, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Exhibition Water Colors, Six Pieces, Not Otherwise Entered.....	10 00
Mary E. Wiltberger...	Columbus, O.....	2d Best.....	5 00

## PASTELS.

John N. Piersche...	Columbus, O.....	Best Portrait.....	3 00
Mary W. Russell.....	Springfield, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Landscape.....	3 00
Maud Myers.....	Round Head, O.....	2d Best.....	2 00
H. Fenstermacher...	Springfield, O.....	Best Animal.....	2 00
Mary W. Russell.....	Springfield, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Game.....	3 00
Mary W. Russell.....	Springfield, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Fruit.....	3 00
Maud Myers.....	Round Head, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Still Life.....	3 00
H. Fenstermacher...	Springfield, O.....	2d Best.....	2 00
John N. Piersche...	Columbus, O.....	Best Figure.....	3 00
Maud Myers.....	Round Head, O.....	2d Best.....	2 00

## DRAWINGS.

Ferol Sibley.....	Columbus, O.....	Best Portrait, Crayon or Char- coal.....	2 00
Ferol Sibley.....	Columbus, O.....	2d Best.....	1 00
Mrs. C. N. Hunter...	Springfield, O.....	Best Landscape, Crayon or Charcoal.....	2 00
Miss Daisy M. Scott...	Columbus, O.....	2d Best.....	1 00
Maud Myers.....	Round Head, O.....	Best Still Life, Crayon or Charcoal.....	2 00
Miss Daisy M. Scott...	Columbus, O.....	2d Best.....	1 00
Mrs. C. N. Hunter...	Springfield, O.....	Best Pen and Ink Drawing, Full Length Figure.....	2 00
H. Fenstermacher...	Springfield, O.....	2d Best.....	1 00
H. Fenstermacher...	Springfield, O.....	Best Pen and Ink Drawing, Still Life.....	2 00
Mrs. C. N. Hunter...	Springfield, O.....	2d Best.....	1 00
H. Fenstermacher...	Springfield, O.....	Best Pencil Drawing, Still Life..	2 00
H. Fenstermacher...	Springfield, O.....	Best Pencil Drawing from Fig- ure.....	2 00
Mrs. C. N. Hunter...	Springfield, O.....	2d Best.....	1 00
H. Fenstermacher...	Springfield, O.....	Best Architectural Drawings....	Medal.

## PAINTINGS, DRAWINGS, ETC.

## OPEN TO AMATEURS ONLY.

## OIL PAINTINGS.

Miss Marie Taylor...	Columbus, O.....	Best Portrait.....	5 00
Louise Zumkeller...	Dayton, Ky.....	2d Best.....	3 00
Lillian M. Harner...	Columbus, O.....	Best Full Length Figure.....	3 00
Miss Grace E. Young	Columbus, O.....	2d Best.....	1 00
Miss Marie Taylor...	Columbus, O.....	Best Animal Study.....	3 00
C. Fenstermacher...	Springfield, O.....	2d Best.....	1 00
Miss M. A. Biddle...	Columbus, O.....	Best Landscape.....	3 00
Corynne Snyder.....	Columbus, O.....	2d Best.....	1 00
Lillian M. Harner...	Columbus, O.....	Best Fruit Piece.....	3 00
Mrs. O. Pratt.....	Spring Prairie, Wis..	2d Best.....	1 00

## FINE ARTS—Continued.

Name of Owner.	Postoffice.	Awards.	Amount.
OIL PAINTING—Concluded.			
Miss Ruth Tillman...	Columbus, O.....	Best Flower Piece.....	\$3 00
Corynne Snyder.....	Columbus, O.....	2d Best.....	1 00
Earl H. Hill.....	Columbus, O.....	Best Still Life Study.....	3 00
Corynne Snyder.....	Columbus, O.....	2d Best.....	1 00
Lillian M. Harner.....	Columbus, O.....	Best Exhibition Oil Paintings, Six or More Pieces, Not Otherwise Entered.....	10 00
Miss M. A. Biddle..	Columbus, O.....	2d Best.....	5 00

## WATER COLOR PAINTINGS.

Lillian M. Harner...	Columbus, O.....	Best Portrait.....	4 00
Lillian M. Harner...	Columbus, O.....	2d Best.....	2 00
Amelia E. Ludwig...	Columbus, O.....	Best Full Length Figure.....	3 00
Miss R. B. Carver...	Fallsington, Pa.....	2d Best.....	1 00
Mrs. G. E. Brittain...	Dayton, O.....	Best Ohio Landscape.....	3 00
Elizabeth Leigh.....	Groveport, O.....	2d Best.....	1 00
Elizabeth Leigh.....	Groveport, O.....	Best Landscape (Summer Study).....	3 00
Amelia E. Ludwig...	Columbus, O.....	2d Best.....	1 00
Mrs. Peck.....	Columbus, O.....	Best Flower Piece.....	3 00
Miss Ruth Tillman...	Columbus, O.....	2d Best.....	1 00
Miss R. B. Carver...	Fallsington, Pa.....	Best Fruit Piece.....	3 00
Corynne Snyder.....	Columbus, O.....	2d Best.....	1 00
Mrs. E. L. Graham...	Columbus, O.....	Best Marine Study.....	3 00
Miss Lucile Simon...	Gallon, O.....	2d Best.....	1 00
Corynne Snyder.....	Columbus, O.....	Best Still Life Study.....	3 00
Miss Alice Kunkle...	Greenville, O.....	2d Best.....	1 00
Miss Marie Taylor...	Columbus, O.....	Best Exhibition Water Colors, Six or More Pieces Not Otherwise Entered.....	8 00
Amelia E. Ludwig...	Columbus, O.....	2d Best.....	4 00

## PASTELS.

Lena E. Patterson...	Athens, O.....	Best Portrait.....	3 00
Lillian M. Harner...	Columbus, O.....	2d Best.....	2 00
Lena E. Patterson...	Athens, O.....	Best Landscape.....	2 00
Miss M. Taylor.....	Columbus, O.....	2d Best.....	1 00
Edward C. Russell...	Springfield, O.....	Best Animal.....	2 00
Louise Zumkeller...	Dayton, Ky.....	2d Best.....	1 00
Lena E. Patterson...	Athens, O.....	Best Game.....	2 00
Edward C. Russell...	Springfield, O.....	2d Best.....	1 00
Lena E. Patterson...	Athens, O.....	Best Fruit.....	2 00
Louise Zumkeller...	Dayton, O.....	2d Best.....	1 00
Lena E. Patterson...	Athens, O.....	Best Still Life.....	2 00
Louise Zumkeller...	Dayton, O.....	2d Best.....	1 00
Lillian M. Harner...	Columbus, O.....	Best Figure.....	2 00
Lillian M. Harner...	Columbus, O.....	2d Best.....	1 00
Edward C. Russell...	Springfield, O.....	Best Autumn Landscape.....	2 00
Miss M. Johnson.....	Dayton, O.....	2d Best.....	1 00

## DRAWINGS.

Mrs. G. E. Brittain...	Dayton, O.....	Best Portrait, Crayon or Char- coal.....	2 00
Miss R. B. Carver...	Fallsington, Pa.....	2d Best.....	1 00
Amelia E. Ludwig...	Columbus, O.....	Best Landscape, Crayon or Charcoal.....	2 00
Mrs. O. Pratt.....	Spring Prairie, Wis..	2d Best.....	1 00
Lena E. Patterson...	Athens, O.....	Best Still Life, Crayon or Charcoal.....	2 00
Miss R. B. Carver...	Fallsington, Pa.....	2d Best.....	1 00
Amelia E. Ludwig...	Columbus, O.....	Best Drawing From Cast, Cray- on or Charcoal.....	2 00
Corynne Snyder.....	Columbus, O.....	2d Best.....	1 00
C. Fenstermacher...	Springfield, O.....	Best Pen and Ink Drawing, Full Length Figure.....	2 00
Miss M. Johnson.....	Dayton, O.....	2d Best.....	1 00
Karl Bolander.....	Marion, O.....	Best Pen and Ink Drawing, Still Life.....	2 00
C. Fenstermacher...	Springfield, O.....	2d Best.....	1 00
Alice Dixon.....	Croton, O.....	Best Pen and Ink Landscape...	2 00
Miss Anna Scott.....	Columbus, O.....	2d Best.....	1 00
Heater C. Harris...	Springfield, O.....	Best Pencil Drawing, Still Life..	2 00
Miss M. Johnson.....	Dayton, O.....	2d Best.....	1 00

## FINE ARTS—Concluded.

Name of Owner.	Postoffice.	Awards.	Amount.
DRAWING—Concluded.			
Miss R. B. Carver..	Fallsington, Pa.....	Best Pencil Drawing, Flower Piece .....	\$2 00
Hester C. Harris.....	Springfield, O.....	2d Best.....	1 00
Corynne Snyder.....	Columbus, O.....	Best Pencil Drawing From Figure .....	2 00
Corynne Snyder.....	Columbus, O.....	2d Best.....	1 00
Mrs. G. E. Brittain..	Dayton, O.....	Best Pencil Drawing From Cast .....	2 00
Miss Anna Scott.....	Columbus, O.....	2d Best.....	1 00
Carl Bollander .....	Marion, O.....	Best Architectural Drawings....	2 00
C. Fenstermacher.....	Springfield, O.....	2d Best.....	1 00
Corynne Snyder.....	Columbus, O.....	Best Display Drawings in Pencil, Charcoal, Crayon or Brush, Not Otherwise Entered.	4 00
Lena E. Patterson..	Athens, O.....	2d Best.....	2 00
PHOTOGRAPHY.			
Frank C. Price.....	Columbus, O.....	Best Landscape, Two Prints, 5x7	2 00
Ed. E. Akerly.....	Zanesville, O.....	2d Best.....	1 00
Will G. Helwig.....	Cincinnati, O.....	Best Animal, Two Prints, 5x7..	2 00
Frank C. Price.....	Columbus, O.....	2d Best.....	1 00
Frank C. Price.....	Columbus, O.....	Best Composition, Two Prints, 5x7 .....	2 00
James E. Taggart...	Delaware, O.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, Ill.....	Best Landscape, Two Prints, 4x5	2 00
Frank C. Price.....	Columbus, O.....	2d Best.....	1 00
Will G. Helwig.....	Cincinnati, O.....	Best Animal, Two Prints, 4x5..	2 00
Frank C. Price.....	Columbus, O.....	2d Best.....	1 00
Mrs. S. A. Watson...	Springfield, O.....	Best Composition, Two Prints...	2 00
Frank C. Price.....	Columbus, O.....	2d Best.....	1 00
Frank C. Price.....	Columbus, O.....	Best Six Prints, 3½x3½.....	2 00
Mrs. S. A. Watson...	Springfield, O.....	2d Best.....	1 00
Frank C. Price.....	Columbus, O.....	Best Portrait, Any Size.....	2 00
James E. Taggart...	Delaware, O.....	2d Best.....	1 00
James E. Taggart...	Delaware, O.....	Best Harvest Scene, Any Size...	2 00
Ed. E. Akerly.....	Zanesville, O.....	2d Best.....	1 00
Frank C. Price.....	Columbus, O.....	Best Display, Five Prints, 4x5 or Larger .....	4 00
Will G. Helwig.....	Cincinnati, O.....	2d Best.....	2 00

# EIGHTH DEPARTMENT—MACHINERY AND AGRICULTURAL IMPLEMENTS

P. G. EWART, Member in Charge.

GUS SEIBERLING.....	Superintendent
CARL WILLIAMS.....	Assistant Superintendent
F. J. PALMER.....	Assistant Superintendent
Received from sale of space 1909.....	\$1,832 50
Paid superintendents, etc., 1909.....	138 50
Received from sale of space 1908.....	\$1,999 90
Paid superintendents, etc., 1908.....	120 50

## MACHINERY AND AGRICULTURAL IMPLEMENTS.

Name of Exhibitor.	Postoffice.	Exhibits.
Adams Husker Co.....	Marysville, O.....	Corn Husker, Trucks for Gasoline Engines.
Adams, J. D. & Co.....	Indianapolis, Ind.....	Grader, Roadster, Drags.
Adriance-Platt Co.....	Columbus, O.....	Binder, Mower, Harrows, Hay Rake, Ted- der.
Akron Cultivator Co.....	Akron, O.....	Cultivators, Corn Cutters.
American Drill Co.....	Marion, Ind.....	Grain Drills.
American Seeding Machine Co.....	Richmond, Ind.....	Corn Planters, Grain Drills.
American Seeding Machine Co.....	Springfield, O.....	Corn Planters, Harrows, Potato Planter, Grain Drill.
Appleton Mfg. Co.....	Batavia, Ill.....	Manure Spreader, Corn Husker.
Ashland Steel Range Co.....	Ashland, O.....	Concrete Mixer, Cement Block Machine.
Avery Co.....	Indianapolis, Ind.....	Farm Wagon, Corn Planter, Stalk Cutter, Cultivator.
Anchor Buggy Co.....	Cincinnati, O.....	Phaetons, Carriage, Buggies, Driving Wagon.
American Steel Grave Vault Co.....	Galion, O.....	Steel Grave Vaults.
Alamo Mfg. Co.....	Hillsdale, Mich.....	Gasoline Engines, Light Plant Complete.
Auto Buggy Co., The.....	Norwalk, O.....	Auto Touring Cars, Runabout, Auto Light Delivery Wagon.
Armour & Co.....	Chicago, Ill.....	Fertilizer.
Adams & Adams.....	Westerville, O.....	Piano, Phone Disinfecter.
Auto Wire Fence Clamp.....	Phillipsburg, O.....	Fence Clamp.
American Dump Wagon Co.....	Marion, O.....	Dump Wagon.
Anderson Mfg. Co.....	Elyria, O.....	
Banting Machine Co.....	Toledo, O.....	Contractors' Engine, Stone Spreading Wagons, Hay Press.
Bateman Mfg. Co.....	Orrville, O.....	Potato Digger, Potato Sprayer, Potato Planter, Cultivator, Seed Drills.
Baker Mfg. Co.....	Chicago, Ill.....	Road Grader.
Bennett & Co.....	Westerville, O.....	Corn Harvester, Stump Puller, Tile Ditch- er.
Bird, F. W. Son.....	East Walpole, Mass.....	Parlod Roofing, Waterproof Building Paper.
Birdsell Mfg. Co.....	South Bend, Ind.....	Wagons.
Brown-Manly Plow Co.....	Columbus, O.....	Potato Digger, Cultivators, Harrows, Shovel Plows, Garden Plows, Push Carts.
Brown Mfg. Co.....	Zanesville, O.....	Farm Wagon, Dump Wagon, Cultivators, Harrows, Shovel Plows, Post Hole Dig- gers, Push Carts.
Buch, A., Sons Co.....	Elizabethtown, Pa.....	Land Roller, Corn Shellers, Feed Cutters, Harrows, Lawn Swing.
Bucher & Gibbs Plow Co.....	Canton, O.....	Plows, Disc Harrows, Spike Tooth Har- rows, Cultivators, Post Hole Digger.
Burch Plow Works Co.....	Crestline, O.....	Plows, Potato Digger, Potato Hiller, Har- rows, Land Roller and Pulverizer, Cast Iron Culvert Pipe.
Bimel Buggy Co.....	Stidney, O.....	Buggies.
Bollier Bro. Co.....	Columbus, O.....	Gasoline Engines.
Brown Weber Co.....	Columbus, O.....	Manure Spreader.
Bluffton Cream Separator Co.....	Bluffton, O.....	Cream Separator, Gasoline Engine, Pump- ing Jack.
Buckeye Wire Stretcher.....	Columbus, O.....	Wire Stretcher.
Columbus Equipment Co.....	Columbus, O.....	
Climax Ensilage Co.....	Warsaw, N. Y.....	Ensilage Cutters.
Clark Grave Vault Co.....	Columbus, O.....	Iron Vaults.
Case, J. I., Plow Works.....	Racine, Wis.....	Cultivators, Harrows, Plows, Corn Plant- ers, Transplanters.

## MACHINERY AND AGRICULTURAL IMPLEMENTS—Continued.

Name of Exhibitor.	Postoffice.	Exhibits.
Colgan Machine & Supply Co.....	Columbus, O.....	Cement Block Machines, Cement Brick and Shingle Tile Machines.
Collins Plow Co.....	Quincy, Ill.....	Hay Balers, Harrows, Cultivators, Plows, Shovel Plows.
Columbus Hay Press Co.....	Columbus, O.....	Hay Press, Gasoline Engines, Scales.
Columbus Machine Co.....	Columbus, O.....	Gas Engine, Pump, Feed Mill.
Columbus Plow Co.....	Columbus, O.....	Plows, Harrows.
Conde, H. T., Implement Co.....	Indianapolis, Ind.....	Corn Planters, Hay Rake, Pows, Potato Digger, Hay Loader.
Coquillard Wagon Works.....	Henderson, Ky.....	Farm Wagons.
Colvin, Chase.....	South Charleston, O.....	Fence Posts, Fence, Gates.
Cook Motor Co.....	Delaware, O.....	Gasoline Engines.
Cargill Mfg. Co.....	Columbus, O.....	Gates and Fence, Concrete Mixers.
Cement Tile Machinery Co.....	Waterloo, Iowa.....	Cement Tile Machine, Cement Mixer, Cement Screen.
Columbus Grove Lumber Co.....	Columbus Grove, O.....	Washing Machine.
Compressed Air Washer Co.....	Columbus, O.....	Washing Machine.
Cardiff Cement Drain Tile Co., The..	St. Joseph, Ill.....	Cement Drain Tile Machines.
Crestline Hay Press Co.....	Crestline, O.....	Hay Press.
Century Post Mold Co.....	Fostoria, O.....	Post Molds for Cement Posts.
Columbus Roofing & Supply Co.....	Columbus O.....	Roof Paint, Steam Pipe and Boiler Covering.
Crown, H. J.....	Pittsburg, Pa.....	Camera.
Columbia Planter Co.....	Springfield, O.....	Garden Planter.
Dayton Pittless Scale Co.....	Dayton, O.....	Scales, Gasoline Engines.
Dodd & Struthers.....	Des Moines, Ia.....	Lightning Rods.
Domestic Engine & Pump Co.....	Millersburg, O.....	Gasoline Engine.
Drummond Wire Fence Co.....	Chillicothe, O.....	Wire Fence and Gates.
Deming Co., The.....	Salem, O.....	Pumps, Gasoline Engines, Sprayers.
Durflinger & Son.....	Columbus, O.....	
Dysart Flexible Gate Co.....	Harrisville, O.....	Farm Gate.
Duplex Mill & Mfg. Co.....	Springfield, O.....	Feed Mill.
Enterprise Carriage Mfg. Co.....	Miamisburg, O.....	Buggies.
Edwards Auto Co.....	Columbus, O.....	Auto Buggy.
Eclipse Mfg. Co.....	Columbus, O.....	
Fairbanks, Morse & Co.....	Cincinnati, O.....	Scales, Dynamos, Gasoline Engines, Pumps, Portable Engine, Saw Table.
Foos Mfg. Co.....	Springfield, O.....	Gasoline Engines, Grinding Mills, Forges.
Foot, J. B., Foundry Co.....	Fredericktown, O.....	Concrete Block Machine.
Flint Wagon Works.....	Flint, Mich.....	Wagons, Buggies.
Fell, S. R. Co., The.....	Cleveland, O.....	Medicated Stock Salt.
Flint & Walling Mfg. Co.....	Kendallville, Ind.....	Gasoline Engines, Wood Saw, Tanks, Pumps and Supplies.
Farmers' Fence Co.....	Bellefontaine, O.....	Fence, Fence Stretchers.
Gale Mfg. Co.....	Ablion, Mich.....	Plows, Corn Planters, Harrows, Cultivators, Shovel Plows.
Gallon Iron Works.....	Gallon, O.....	Stone Crusher, Road Grader, Dump Wagon, Scrapers, Culvert Pipe, Land Pulverizer.
Good Roads Machinery Co.....	Pittsburg, Pa.....	Steam Roller, Engine, Street Sweeper.
German Kall Works.....	New York, N. Y.....	Potash.
Gem Incubator Co., The.....	Dayton, O.....	Incubators.
Glor Bros. & Willis Mfg. Co.....	Attica, N. Y.....	Feed and Litter Carriers, Stanchions, Manger Fixtures.
Hardie Mfg. Co.....	Hudson, Mich.....	Spraying Machines.
Harrison, W. R., & Co.....	Massillon, O.....	Feed and Enslage Cutters, Blowers and Carriers.
Hayden Auto Block Machine Co.....	Columbus, O.....	Cement Sewer Pipe and Molds, Concrete Blocks and Machines, Mixers, Ornamental Work.
Heller, Allen & Co.....	Napoleon, O.....	Wind Mills, Tanks, Tank Heaters.
Hench & Dromgold Co.....	York, Pa.....	Harrows, Gasoline Engines, Potato Diggers, Farm Wagons, Manure Spreaders, Corn Harvesters, Hay Loaders, Feed Mills, Cultivators.
Hoover Mfg. Co.....	Avery, O.....	Potato Digger and Picker, Potato Sorter and Sprouter.
Huffman, E. H.....	Columbus, O.....	Potato Planter, Cream Separators, Gasoline Engines, Corn Planters, Grain Drills, Buggies, Wagons, Cultivators.
Humane Horse Collar Co.....	Omaha, Neb.....	Horse Collars.
Hurst, C. B. Co.....	Chillicothe, O.....	Scales, Stock and Storage Tanks.
Hunt, Helm & Ferris Co.....	Harvard, Ill.....	Hay Track and Carriers, Barn Door Hangers, Litter Carriers, Coaster Wagons.
Hirst Mfg. Co.....	Barberton, O.....	Potato Diggers.
Hercules Fence Anchor Co.....	Sharon Center, O.....	Fence Anchors.
Hickson Sewer Mold Co.....	Mt. Gilead, O.....	Jointless Pipe.
Hygeno Disinfectant Co., The.....	Cleveland, O.....	Disinfectant.
Humane Spring Double Tree Co.....	Zanesville, O.....	Spring Double Tree.
Indiana Silo Co.....	Anderson, Ind.....	Silo, Enslage Cutters.

## MACHINERY AND AGRICULTURAL IMPLEMENTS—Continued.

Name of Exhibitor.	Postoffice.	Exhibits.
International Harvester Co.....	Columbus, O.....	Gasoline Engines, Manure Spreaders, Wagons, Cream Separators, Harrows, Cultivator, Hay Stackers, Hay Rakes, Stackers, Electric Light Plant.
Iron Crib & Bin Co.....	Wooster, O.....	Corn Cribbs.
Independent Fertilizer Co.....	Columbus, O.....	Fertilizers.
Indiana Pitless Scale Co.....	New Castle, Ind.....	Scales.
Jeschke Mfg. Co.....	Bellevue, O.....	Corn Cutter, Tile Ditchers.
Jewell Carriage Co.....	Carthage, O.....	Buggies, Touring Car.
Johnston Harvester Co.....	Columbus, O.....	Manure Spreaders, Binders, Mowers, Hay Rake and Tedder, Harrows.
Jones Hardware Co.....	Richmond, Ind.....	Plows, Harrows, Corn Planters, Cultivators.
Jackson Fence Co.....	Jackson, Mich.....	Woven Wire Poultry and Farm Fence, Stretchers.
Kelly Springfield Road Roller Co.....	Springfield, O.....	Steam Rollers.
Kenney Machinery Co.....	Indianapolis, Ind.....	Hay Press, Corn Husker, Traction Engine.
Koontz, G. M.....	Vanatta, O.....	Wire and Fence Stretchers, Cement Posts.
Kent Steel Fence Post Co.....	Kent, O.....	Fence Posts.
Kalamazoo Tank & Silo Co.....	Kalamazoo, Mich.....	Silo, Ensilage Cutter, Stanchions, Cement Mold.
Kentucky Mfg. Co.....	Louisville, Ky.....	Farm Wagon.
Lee & Squires Co., The.....	Toledo, O.....	Wheeled Scrapers.
Lansing Wagon Co.....	Lansing, Mich.....	Wagons, Buggies.
Lehr Agricultural Co.....	Fremont, O.....	Harrows, Clod Crushers, Land Rollers, Cultivators.
Loomis Machine Co.....	Tiffin, O.....	Well Drilling Machines.
Louden Machine Co.....	Fairfield, Iowa.....	Litter Carriers, Hay Track and Carriers, Barn Door Hangers, Stanchions.
Louisville Brick & Tile Co.....	Louisville, O.....	Hollow Blocks, Tile for Silo.
Middlefield Mfg. Co.....	Cleveland, O.....	Hot Air Pumping Engine.
Mason Mfg. Co., The.....	Canton, O.....	Butter Maker.
Manson-Campbell Co.....	Detroit, Mich.....	Fanning Mills, Fireless Cookers.
Milburn Wagon Co.....	Toledo, O.....	Farm Wagons.
Moline Plow Co.....	Moline, Ill.....	Manure Spreaders, Plows, Harrows, Cultivators, Farm Wagons, Farm Trucks.
Myers, C. H.....	Bucyrus, O.....	Leafless Extension Tables.
Mast, Foss & Co.....	Springfield, O.....	Wind Mills, Pumps, Spray Pumps, Lawn Mowers, Gasoline Engines.
Myers, H. A. Mfg. Co.....	Warsaw, Ind.....	Hay Car, Lawn Swing, Step Ladder.
Mendenhall Gate Co.....	Waverly, O.....	Automatic Pivot Gate.
Mulzer Collapsible Crate Co.....	Powell, O.....	Collapsible Stock Crate.
McCullough Mfg. Co.....	Minneapolis, Minn.....	Oil Pump for Lubricating Steam and Gasoline Engines.
Mansfield Machine & Supply Co.....	Mansfield, O.....	Combination Tool, Combined Flue Cutter and Expander, Cylinder Wrench for Threshermen, Drill Attachment for Flue Cutter and Expander.
Moser & Baumgartner.....	Berne, Ind.....	Wind Stacker.
Mansfield Steel & Wire Works, The.....	Mansfield, O.....	
National Fire Proof Co.....	Canton, O.....	Hollow Building Blocks, Fire Brick, Fire Brick, Fire Proofing, Drain Tile, Silo Tile, Hollow Blocks for Stucco Work.
National Hog Feeder Co.....	Hunter, N. D.....	Hog Motor Grinder and Feeder.
Newark Machine Co.....	Newark, O.....	Manure Pulverizer and Spreader.
New Process Fertilizer Co.....	Columbus, O.....	Fertilizers.
New Idea Spreader Co.....	Coldwater, O.....	Manure Spreader.
No Sag Gate Co.....	Galesburg, Ill.....	Gate.
Ohio Cultivator Co.....	Bellevue, O.....	Cultivators, Harrows, Plows, Shovel Plows, Hand Rollers, Pulverizers, Hay Press.
Ohio Rake Co.....	Dayton, O.....	Cultivators, Hay Rake, Hay Loader, Hay Tedder, Corn Planter, Transplanter, Land Roller, Potato Harvester, Harrow, Corn Harvester.
Ohio Traction Mfg. Co.....	Marion, O.....	Gasoline Traction Engines, Hay Press, Condenser Press and Engine, Combined.
Oliver Chilled Plow Works.....	South Bend, Ind.....	Plows, Cultivators and Extras.
Ohio Corrugated Culvert Co.....	Middletown, O.....	Corrugated Culvert Pipe.
Ohio Pulverizer Co., The.....	New London, O.....	Soil Pulverizer.
Olds Gas Power Co.....	Lansing, Mich.....	Gasoline Engines.
Perfection Road Machine Co.....	Gallon, O.....	Road Graders, Dump Box, Pulverizers.
Perfect Gate Co., The.....	Forest, O.....	Farm Gate.
Petrolithic Paving Co.....	Indianapolis, Ind.....	Rolling Tampers.
Papee Machine Co.....	Shortsville, N. Y.....	Ensilage Cutters.
Parlin & Orendorff Co.....	Canton, Ill.....	Corn Planter, Gasoline Engine, Cultivators, Plows, Potato Digger, Harrows, Farm Wagons, Cream Separators.
Parsons Band Saw Cutter Co.....	Indianapolis, Ind.....	Corn Husker, Shock Loader, Grain Self-Feeder, Grain Grader, Washing Machine, Hay Press.

## MACHINERY AND AGRICULTURAL IMPLEMENTS—Continued.

Name of Exhibitor.	Postoffice.	Exhibits.
Pella Stacker Co.....	Pella, Ill.....	Self-Feeder and Band Cutter.
Philadelphia Lawn Mower Co.....	Philadelphia, Pa.....	Lawn Mowers.
Phillips Cement & Stone Co.....	Columbus, O.....	Cement Blocks.
Peabody Buggy Co.....	Fostoria, O.....	Buggies.
Pivot Gate Co.....	Columbus, O.....	Farm Gate.
Poe's Vineyard.....	Kenton, O.....	Grapes.
Parke, Davis & Co.....	Detroit, Mich.....	
Racine Sattley Co.....	Indianapolis, Ind.....	Buggies, Farm Wagons, Cultivators, Corn Planters, Plows, Harrows.
Reeves Engine Co.....	Mt. Vernon, O.....	Gas or Gasoline Engines, Air Starting Outfit, Generator and Switchboard.
Riggie Wagon Co.....	Columbus, O.....	Wagons.
Ritchey, Geo. E., Supply Co.....	Columbus, O.....	Road Graders, Dump Box, Wheel Scraper, Drag Scraper, Road Plows, Feed Troughs, Culvert Pipe, Wheelbarrow.
Rosenthal Corn Husker Co.....	Milwaukee, Wis.....	Corn Huskers.
Ross, E. W., Co.....	Columbus, O.....	Silo, Ensilage Cutters with Blowers.
Rude Bros. Mfg. Co.....	Liberty, Ind.....	Manure Spreaders, Grain Drills, Farm Wagons.
Roderick Lean Mfg. Co.....	Mansfield, O.....	Grain Drills, Harrows, Cultivators, Land Rollers, Garden Plow.
Scioto Buggy Co.....	Columbus, O.....	Surreys, Phaetons, Buggies.
Safety Shredder Co.....	Newcastle, Ind.....	Corn Husker, Fodder Shredder, Gasoline Engine.
St. Clair Mfg. Co.....	Dayton, O.....	Acetylene Generator, Hot Plates.
St. Paul Cement Machine Co.....	St. Paul, Minn.....	Cement Tile Machine, Cement Mixer.
Scheidler Machine Works.....	Newark, O.....	Traction Engine, Portable Saw Mill, Extra Set Works.
Sechler, D. M., Carriage Co.....	Moline, Ill.....	Manure Spreaders, Corn Planters.
Shelby Foundry Co.....	Shelby, O.....	Culvert Pipe.
Silo & Cistern Block Co.....	Sunbury, O.....	Silo Made of Perfect Cement Blocks.
Smith Mfg. Co.....	Chicago, Ill.....	Manure Spreaders, Gasoline Engines, Cream Separators, Litter Carriers Outfit.
South Bend Chilled Plow Co.....	South Bend, Ind.....	Plows, Potato Diggers, Harrows, Harrow Cart.
Star Mfg. Co.....	New Lexington, O.....	Feed Mills, Gasoline Engines.
Star Storm Front Co.....	Troy, O.....	Vehicle Storm Fronts, Rain Aprons, Horse Clothing, Dust Hoods.
Syracuse Chilled Plow Co.....	Syracuse, N. Y.....	Wheelbarrows, Hand Plows, Plows, Harrows, Cultivators, Shovel Plows, Drag Scrapers, Motor.
Spaulding Tiling Machine Co.....	Cleveland, O.....	Tiling Machine.
Smith Agricultural Chemical Co.....	Columbus, O.....	Fertilizers.
Standard Oil Co.....	Columbus, O.....	Lamps, Oil Stoves, Oil Heaters.
Studebaker Automobile Sales Co.....	Columbus, O.....	Automobiles.
Spring Steel Fence & Wire Co.....	Anderson, Ind.....	Wire Fence and Gates.
Street Gate Co.....	Wagoner, Ill.....	Farm Gate and Auto Farm Gate.
Steiner, M. & Co.....	Dayton, O.....	Gasoline Engines, Pump Jack, Power Pump.
Standard Dishwasher, The.....	Zanesville, O.....	Dish Washing Machine.
Spray Motor Co.....	Buffalo, N. Y.....	Sprayers, Painting Machine, Duplex Pump.
Swift & Bates.....	Cuba, N. Y.....	Swing Stanchions.
Toledo Plow Co.....	Toledo, O.....	Land Roller, Pulverizer, Scrapers, Stone Boat, Stanchions, Plows, Collapsible Crates, Lightning Rods.
Tornado Mfg. Co.....	Columbus, O.....	Disinfectant and Insect Destroyer.
Thomas Mfg. Co.....	Springfield, O.....	Grain Drills, Hay Loaders, Mowing Machines, Hay Tedder, Corn Drill, Disc Harrows, Lawn Mowers.
Troy Wagon Works Co.....	Troy, O.....	Farm Wagons, Dump Wagons, Farm Trucks.
Turnbull Wagon Co.....	Defiance, O.....	Farm Wagons, Handy Trucks.
Universal Animal Food Co.....	Groveport, O.....	Animal and Poultry Regulator.
Voss, J. H., & Son.....	Atlanta, O.....	Knife Grinder, Plows, Harrows.
Van Wert Machine Co.....	Van Wert, O.....	Gas and Gasoline Engines.
Victor Mfg. Co.....	Columbus, O. & Leavenworth, Kan.....	Washing Machine, Ironing Board, Self-Heating Irons.
Wayne Works.....	Richmond, Ind.....	Grain Drills, Corn Planters, Light Wagons and Carts.
Williams Contractors' Supply Co.....	Columbus, O.....	Wheel Scraper, Motor Roller, Concrete Mixer, Rock Crusher, Engines, Road Graders, Street Sweepers, Dump Wagons, Road Plows, Culvert Pipe, Concrete Carts, Concrete Barrows, Patrol Cart and Can.
Wilson, F. M.....	Columbus, O.....	
Wood, Walter A., M. & R. Mach. Co.....	Columbus, O.....	Blinder, Mower, Harrow, Hay Rakes, Hay Tedders, Cultivators, Gasoline Engines, Dynamo, Gas Engines.
Whitman Agricultural Co.....	St. Louis, Mo.....	Hay Press.



## MACHINERY AND AGRICULTURAL IMPLEMENTS—Concluded.

Name of Exhibitor.	Postoffice.	Exhibits.
Watkins, J. R., Medical Co.....	Winona, Minn.....	Stock and Poultry Remedies, Extracts, Spices, Toilet Articles.
Wasson Stanchion Co.....	Cuba, N. Y.....	Stanchions.
Westinghouse Electric Mfg. Co.....	Pittsburg, Pa.....	
Winthrop Asphalt Shingle Co.....	Chicago, Ill.....	Asphalt Shingles.
Zeig, F. B., Mfg. Co.....	Fredericktown, O.....	Road Grader, Culvert Pipe.

## NINTH DEPARTMENT—MECHANICS' AND MANUFACTURERS' PRODUCTS.

JACOB DEAN, Member in Charge.

S. D. KILLIAN.....	Superintendent
Received from sale of space 1909.....	\$901 85
Paid superintendent, labor, etc., 1909.....	72 00
Received from sale of space 1908.....	\$1,082 20
Paid superintendent, labor, etc., 1908.....	84 85
Banner Buggy Co., St. Louis, Mo.....	Buggies, Surreys, Phaetons, Runabouts, etc.
Buckeye Saddlery Co., Columbus, O.....	Light and Heavy Harness, Saddles, Robes, Brushes, etc.
Buckeye Saw Co. & File Works, Columbus, O.....	Saws of all kinds, Hand and Power, Saw Mills and Factories.
Cleveland Puncture Proof Tire Co., Columbus, O.....	Manufacturers of Puncture Proof Tire for Automobiles and Buggies.
Colonial Carriage Co., Circleville, O.....	Buggies, Surreys, Phaetons and Single Turn-outs, etc.
Columbus Buggy Co., Columbus, O.....	Fine Carriages, Buggies, Phaetons, Surreys, Runabouts, Automobiles, etc.
Columbus Carriage and Harness Co., Columbus, O.....	Buggies, Phaetons, Runabouts, Surreys, Harness Robes, etc.
Columbus Heating and Ventilating Co., Columbus, O.....	Furnaces, Sanitary Toilets and Ventilating, Factories and Public Buildings.
Commercial Paste Co., Columbus, O.....	A full line of Pastes for Office, Book Bindery or domestic use.
Findlay Carriage Co., Findlay, O.....	Buggies, Surreys, Phaetons, Carriages and Runabouts.
Gaumer and Sons, E. B., Urbana, O.....	Pony Phaetons, Traps, etc.
Gem City Acetylene Generator, Dayton, O.....	Generators for making Acetylene Lights, etc., for lighting private residences and plants.
Hahn Safe Co., The C. W., Columbus, O.....	Fire and Burglar Proof Safes.
Haswell Furnace Co., Circleville, O.....	Furnaces of several different kinds.
Heskett and Co., W. E., Columbus, O.....	Stoves, Ranges and Heaters.
Knoderer and Co., L. F., Columbus, O.....	The Hot Air and Blast Heaters for heating and cooking.
Lamneck and Co., W. E., Columbus, O.....	All kinds of Roofing Material, such as Tile, Slate, Tin, Tar Paper, etc.
McCray Refrigerator Co., Branch, Columbus, O.....	Large and small Refrigerators for all purposes and dairy purposes.
McIntyre Co., W. H., Auburn, Ind.....	Automobiles, Pleasure and Transfer Cars.
Middletown Buggy Co., Middletown, O.....	Buggies and Carriages, Phaetons and Runabouts.
Monarch Specialty Co., Columbus, O.....	Water Power Washing Machines, etc.
Monypenny-Hammond Co., Columbus, O.....	Displayed the "Red Bird" Coffee which they represent in Ohio.
Morris-Woodhull Co., Dayton, O.....	Buggies and Doctors' Storm Fronts and Carriages.
Ohio Carriage Manufacturing Co., Columbus, O.....	Buggies, Surreys, Phaetons, Harness, etc.
Ohlens Sons Saw Co., The James, Columbus, O.....	Fine Saws and Saw Mill Supplies.
O. Kay Coffee Co., Columbus, O.....	Demonstrated the making of O. K. Coffee.
One Minute Washer Co., Sandusky, O.....	Washing Machines, Water and Hand Power.
Peerless Steel Range Co., Columbus, O.....	Steel Ranges, Heaters and Cooking Stoves.
Peters Buggy Co., Columbus, O.....	Buggies, Surreys, Phaetons, etc.
Poste Bros. Buggy Co., Columbus, O.....	Buggies, Runabouts, Phaetons, Surreys, etc.
Quad Stove Co., Columbus, O.....	Stoves, Ranges and Heaters of all kinds.
Rex Buggy Co., Connersville, Ind.....	Buggies, Phaetons, Surreys and Runabouts.
Rund Manufacturing Co. (Columbus Branch), Pittsburg, Pa.....	Steam and Gas Heaters for residences or stores.
Seidel Buggy Co., Richmond, Ind.....	Storm Fronts, Buggies and Doctors' Carriages.
Sells, J. H. & F. A., Co., Columbus, O.....	Light and Heavy Harness, Robes, Blankets, Saddles, etc.
Shepard Paint Co., Columbus, O.....	Paints, Oils, Varnishes, etc.
Stewart Bros. Co., Columbus, O.....	Stoves, Ranges and Heaters.
Union City Carriage Co., Union City, Ind.....	Buggies, Surreys, Carriages, Phaetons.
United States Carriage Co., Columbus, O.....	Hearses, Funeral Cars, Landaus, Doctors' Automobiles and Touring Cars.

**MECHANICS' AND MANUFACTURERS' PRODUCTS—Concluded.**

Walborn and Ricker Co., St. Paris, O.....	Pony Cabs, Buggies and Povreness Carriages.
Walz and Son, Wm., Columbus, O.....	Harness, heavy and light, Robes, Whips, Blankets, etc.
Warren Paint Co. and Ohio Varnish Co., Columbus, O.....	Paints, Varnishes, Oils, etc.
Warren and Southwick, Columbus, O.....	Fancy Delivery Vans and Wagons, Grocers' and Milk.
Watson Co., The H. F., Erie, Pa.....	Roofing Asbestos, covering and lining for Steam Heating Pipes and Furnaces.
West Manufacturing Co., Columbus, O.....	Wrapping Paper and Office Supplies.
Wilkin and Redman Co., Columbus, O.....	Pianos, Organs, etc.
Zimmerman Manufacturing Co., Auburn, Ind.....	Buggies, Surreys, Runabouts, Phaetons, etc.

## TENTH DEPARTMENT—MERCHANDISE, MUSIC, ETC.

JACOB DEAN, Member in Charge.

G. F. RAMSEY.....Superintendent

Received from sale of space 1909.....	\$167 45
Paid superintendent, janitor, labor, etc., 1909.....	63 00

Received from sale of space 1908.....	\$177 70
Paid superintendent, janitor, labor, etc., 1908.....	96 00

Apple, M. S., Columbus, O.....	Glass, Glass Engraving and Shells.
American Sign Co., Kalamazoo, Mich.....	Electric Signs.
Arnold, W. H., Columbus, O.....	Jewelry, etc.
Bash Rug Co., The, Columbus, O.....	Rugs.
Carlisle & Sons, Columbus, O.....	Furniture, Stoves, Carpets, etc.
Columbus Business College, Columbus, O.....	Typewriting Exhibit, etc.
Children's Home Society, Columbus, O.....	Charts, Pictures, etc.
California Perfume Co., The, Columbus, O.....	Perfumes, Soaps, etc.
Fonner, G. W., Toledo, O.....	Orangeade.
Farral, K. F., Columbus, O.....	Oriental Goods, Drawn Work, etc.
Hesket, W. E., Columbus, O.....	Furniture, Carpets, Curtains, etc.
Hoosier Cabinet Co., New Castle, Ind.....	Kitchen Cabinets.
Larkin & Co., Buffalo, N. Y.....	Soaps, Perfumes, etc.
Morehouse-Martens Co., Columbus, O.....	Dry Goods, Sewing Machines, etc.
National Cash Register Co., Dayton, O.....	Cash Registers.
Progress Magazine Co., The, Columbus, O.....	Magazines, etc.
Punttenny & Enstler Co., Columbus, O.....	Pianos, Band Instruments, etc.
Reiser & Co., Max, Columbus, O.....	Ladies' Wearing Apparel.
Singer Sewing Machine Co., Cincinnati, O.....	Sewing Machines, etc.
Stewart Bros., Columbus, O.....	Furniture, Carpets, Curtains, etc.
Westlake, M. W., Columbus, O.....	Glassware, Glass Engraving, etc.
Wilson Mfg. Co., The, Columbus, O.....	Washing Machines, etc.

# INDEX TO EXHIBITORS

## HORSES.

### AMERICAN BRED DRAFT.

Name.	Postoffice.
Bidwell, Marion.....	West Jefferson, O.
Domigan, H. L.....	Sunbury, O.
Ferguson, C. A.....	Delaware, O.
Jones, C. M.....	Plain City, O.
Leonard & Geyer.....	London, O.
McLain, Lonzo.....	Lima, O.

### AMERICAN CARRIAGE HORSES

Domigan, H. L.....	Sunbury, O.
Grimes, H. S.....	Portsmouth, O.
Highland Forest Farm.....	Fulton, O.
Leist, Dr. C. E.....	Columbus, O., 54 E. Gay St.
Leonard & Geyer.....	London, O.
Olentangy Stock Farm.....	Columbus, O., Station B
Parsell, B. F.....	Reynoldsburg, O.
Perkins, Jacob B.....	Cleveland, O., Blackstone Bldg.
Ramsey, Nelson.....	Sunbury, O.
Robison, W. S.....	Mt. Sterling, O.
Rolson, E. P., & Son.....	Delaware, O.
Smith, C. G.....	Reynoldsburg, O.
Smith, Seymour.....	Pataskala, O.

### BELGIAN.

Bidwell, Marion.....	West Jefferson, O.
Crawford, G. W.....	Newark, O.
McCann, Benj. F.....	Dayton, O.

### CLYDESDALES AND SHIRES.

Bidwell, Marion.....	West Jefferson, O.
Leonard & Geyer.....	London, O.

### COACHING PARADE.

Highland Forest Farm.....	Fulton, O.
Olentangy Stock Farm.....	Columbus, O., Station B
Robison, W. S.....	Mt. Sterling, O.

### FRENCH COACH.

Domigan, H. L.....	Sunbury, O.
Leonard & Geyer.....	London, O.
McLaughlin Bros.....	Columbus, O.

### GERMAN COACH.

Boord, Samuel T.....	South Columbus, O.
Crawford, G. W.....	Newark, O.
Domigan, H. L.....	Sunbury, O.
Leonard & Geyer.....	London, O.
Rolson, E. P., & Son.....	Delaware, O.
Sowers, G. W., & Son.....	Huntington, Ind.

## INDEX TO EXHIBITORS—HORSES—Continued.

## GRADE DRAFT.

Name.	Postoffice.
Bidwell, Marion.....	West Jefferson, O.
Domigan, H. L.....	Sunbury, O.
Elliott, J. M.....	Columbus, O., Station A
Leonard & Geyer.....	London, O.
Rolson, E. P., & Son.....	Delaware, O.
Stephens, P. W.....	Ashley, O.

## HACKNEYS.

Bunn, C. E.....	Peoria, Ill.
Leonard & Geyer.....	London, O.

## HARNESS CLASS.

Bunn, C. E.....	Peoria, Ill.
Crowe, Harry.....	Duval, O.
Highland Forest Farm.....	Fulton, O.
Leist, Dr. C. E.....	Columbus, O., 54 E. Gay St.
Leonard & Geyer.....	London, O.
Olentangy Stock Farm.....	Columbus, O., Station B
Robison, W. S.....	Mt. Sterling, O.
Young, C. A.....	Lancaster, O.

## PERCHERONS.

Bidwell, Marion.....	West Jefferson, O.
Crawford, G. W.....	Newark, O.
Domigan, H. L.....	Sunbury, O.
Ferguson Bros.....	Delaware, O.
Jones, C. M.....	Plain City, O.
Leonard & Geyer.....	London, O.
McCann, Benj. F.....	Dayton, O., U. B. Bldg.
McLain, Lonzo.....	Lima, O.
McLaughlin Bros.....	Columbus, O.
Sowers, G. W., & Son.....	Huntington, Ind.

## ROADSTERS—NON-STANDARD.

Olentangy Stock Farm.....	Columbus, O., Station B
Parsell, B. F.....	Reynoldsburg, O.
Patterson, Robert.....	Hilliards, O.
Perkins, Jacob B.....	Cleveland, O.
Ramsey, Nelson.....	Sunbury, O.
Robison, W. S.....	Mt. Sterling, O.
Rolson, E. P., & Son.....	Delaware, O.
Smith, Seymour.....	Pataskala, O.
Smith, C. G.....	Reynoldsburg, O.
Wyscarver, John.....	Columbus, O., 49 Fourteenth St.
Young, C. A.....	Lancaster, O.

## ROADSTERS—NON-STANDARD.

Andrews, A. H.....	Columbus, O., Front and Lynn
Bailey, C. V.....	Hilliards, O.
Dennis, A. W.....	Columbus, O., 959 E. Fulton St.
Domigan, H. L.....	Sunbury, O.
Dovel Park Stock Farm.....	Pickerington, O.
Elliott, J. M.....	Columbus, O., Station A
Grimes, H. S.....	Portsmouth, O.
Grove, John L.....	Newark, O.
Highland Forest Farm.....	Fulton, O.
Joseph, A.....	Columbus, O., 1169 Oak St.
Leonard & Geyer.....	London, O.
Likins, E. E.....	Caledonia, O.

## INDEX TO EXHIBITORS—Continued—HORSES—Concluded.

## ROADSTERS—STANDARD BRED.

Name.	Postoffice.
Dovel Park Stock Farm.....	Pickerington, O.
Heskitt, J. R.....	Fulton, O.
Highland Forest Farm.....	Fulton, O.
Jamison, H. J.....	Delaware, O.
Leist, Dr. C. E.....	Columbus, O., 54 E. Gay St.
Leonard & Geyer.....	London, O.
Olentangy Stock Farm.....	Columbus, O., Station B
Ramsey, Nelson.....	Sunbury, O.
Rolson, E. P., & Son.....	Delaware, O.
Smith, C. G.....	Reynoldsburg, O.
Smith, Seymour.....	Pataskala, O.
Wyscarver, John.....	Columbus, O., 49 Fourteenth St.

## SADDLE.

Donovan, H. E., Agt.....	Columbus, O., 929 Summit St.
Jones, J. W.....	Columbus, O., care D. & D. Institution
Perkins, Jacob B.....	Cleveland, O.
Robison, W. S.....	Mt. Sterling, O.
Vause, J. B.....	Lockbourne, O.

## UTILITY CLASS.

Stephens, P. W.....	Ashley, O.
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## PONIES.

## OHIO SHETLAND PONIES.

Gavitt, Cobb.....	Ashley, O.
Holmes & Walker.....	Gambler O.
Hunter, C. C.....	Mt. Vernon, O.
Jamison, Benj.....	Washington C. H., O.
Kahler & Justice.....	Plain City, O.

## OTHER THAN SHETLAND.

Bidwell, Marion.....	West Jefferson, O.
Bunn, C. E.....	Peoria, Ill.
Dolle, Chas.....	Columbus, O., 920 Oak St.
Gavitt, Cobb.....	Ashley, O.
Heyl, Geo. A.....	Washington, Ill.
Holmes & Walker.....	Gambler, O.
Hunter, C. C.....	Mt. Vernon, O.
Jamison, Benj.....	Washington C. H., O.
Jones, Winifred.....	Delaware, O.
Kahler & Justice.....	Plain City, O.
Smith Bros.....	Mt. Vernon, O.

## SHETLAND.

Bidwell, Marion.....	West Jefferson O.
Black, Logan W.....	Jacksonville, Ill.
Bunn, C. E.....	Peoria, Ill.
Coe, Walter T.....	Gahanna, O.
Elliott, Evans.....	Galloway, O.
Gaskell, A. L.....	Indianapolis, Ind.
Gavitt, Cobb.....	Ashley, O.
Heyl, Geo. A.....	Washington, Ill.
Holmes & Walker.....	Gambler, O.
Hunter, C. C.....	Mt. Vernon, O.
Jamison, Benj.....	Washington C. H., O.
Kahler & Justice.....	Plain City, O.
Pavey, C. W.....	Columbus, O., 2259 N. High St.
Smith Bros.....	Mt. Vernon, O.

## INDEX TO EXHIBITORS—Continued.

## CATTLE.

## ABERDEEN ANGUS.

Name.	Postoffice.
Bradfute, D., & Son.....	Cedarville, O.
Ferguson & Hutchison.....	Xenia, O.
Johnson, B. B., & Sons.....	Atlanta, Ind.
Kerr, Lew.....	Newton, Ind.

## AYRSHIRES.

Arkcoll, Blake, W. W.....	Paloi, Pa.
McCormick, W. L.....	Pataskala, O.

## BROWN SWISS.

Ayres, H. W.....	Honey Creek, Wis.
Hull Bros.....	Painesville, O.
Wampler, A. F.....	Dayton, O.

## DEVONS.

Shaw, James C.....	Newark, O.
Wheeler Homestead, The.....	Kanona, N. Y.

## FAT CATTLE.

Bradfute, D., & Son.....	Cedarville, O.
Carpenter & Ross.....	Mansfield, O.
Chamberlin, John.....	Flat Rock, Mich.
Chandler, Merritt.....	Onway, Mich.
Ferguson & Hutchison.....	Xenia, O.
Johnson, Thomas.....	Columbus, O.
Johnson, B. B., & Sons.....	Atlanta, Ind.
Kerr, Lew.....	Newtown, Ind.
McCoy, Mart L.....	Washington C. H., O.
McCray, Warren T.....	Kentland, Ind.
West & West.....	Hillsboro, O.

## GALLOWAYS.

Chamberlin, John.....	Flat Rock, Mich.
Frantz, James, & Sons.....	Bluffton, O.

## GUERNSEYS.

Bell, W. H., & Son.....	Scotts Station, Ky.
Chestnut Hill Farm.....	Coalburg, O.
Coe, Walter T.....	Gahanna, O.
Elliott, J. M.....	Columbus, O., Station A, R. R. 2
Phelps, W. D.....	Farmville, Va.
Whittier, W. P.....	Galena, O.

## HEREFORDS.

Chandler, Merritt.....	Onway, Mich.
Graves, Clem.....	Bunker Hill, Ind.
Hooker, John.....	New London, O.
Luce & Moxley.....	Shelbyville, O.
McCray, Warren T.....	Kentland, Ind.

## HOLSTEINS.

Derrer Bros.....	Camp Chase, O.
Eager, F. E., & Son.....	Howell, Mich.
Paxton & Wylie.....	Houston, Pa.
Pierson Stock Farm.....	Hadley, Mich.
Ross, J. R., & Sons.....	Blanchester, O.
Zehring, E. L.....	Germantown, O.
Watts, Carl M.....	Columbus, O., Station C



## INDEX TO EXHIBITORS—Continued—CATTLE—Concluded.

## JERSEYS.

Name.	Postoffice.
Boyd, John F.....	Rushville, Ind.
Chambers, J. V., & Sons.....	West Alexander, Pa.
Good Hold Farm.....	Mentor, O.
Hartman Stock Farm.....	Columbus, O.
Ross, C. B.....	Blanchester, O.
Spann, W. R.....	Dallas, Texas
Zehring, E. L.....	Germantown, O.

## POLLED DURHAMS.

Edwards, A. L., & B.....	Versailles, Ky.
Garrett, M. M.....	Coldwater, Mich.
Miller, J. H.....	Peru, Ind.
Miller, W. H., & Sons.....	Mulberry, Ind.
Rosenberger & Edwards.....	Tiffin, O.
Vollmer Bros.....	Osgood, Ind.

## RED POLLS.

Hartline, Frank.....	Strasburg, O.
Inelchen, Geo., & Sons.....	Geneva, Ind., R. R. 2
Prewett, M. F.....	Eatons, W. Va.
Shurtz, C. A.....	Gaysport, O.

## SHORTHORN.

Branson, C. A.....	Cadiz, O.
Carpenter & Ross.....	Mansfield, O.
Gerlaugh, J. A.....	Harshman, O.
Hanna, D. R.....	Ravenna, O.
Johnson, C. E.....	Flushing, O.
Johnson, Thomas.....	Columbus, O.
Miller, J. H.....	Peru, Ind.
Nelson, Thos. H.....	Hillsboro, O.
Robbins, J. G., & Sons.....	Horace, Ind.
Rosenberg & Edwards.....	Tiffin, O.
Wagner, N. W.....	Fremont, O.
West & West.....	Hillsboro, O.

## SWINE.

## BERKSHIRES.

Barker, E. J.....	Thornton, Ind.
Fisher, A. E.....	Orient, O.
Hupp Farms.....	Birmingham, Mich.
Kite, F. E.....	St. Paris, O.
Meyers, John F.....	Millersburg, O.
Simpson, M. W.....	Freeport, O., R. R. 2
Tharp, W. J.....	Pataskala, O.

## CHESTER WHITES.

Cherry, W. J.....	Xenia, O.
Dever, W. T.....	Lucasville, O.
Fawcett, W. G., & Son.....	Chesterhill, O.
Hardin, F. P. & J. J.....	Lima, O.
Hintz, C., & Sons.....	Fremont, O.
Motherspaw, J. W. L., & Son.....	Newark, O.
Rice, C. S.....	Spencer, O.
Wenger, Charles.....	Clayton, O.

## INDEX TO EXHIBITORS—Continued—SWINE—Concluded.

## DUROC JERSEYS.

Name.	Postoffice.
Baker, W. P.....	Wilmington, O.
Bardwell & Barnard.....	McHenry, Ky.
Brown, D. W., & Son.....	Union City, Ind.
Cadwallader, W. E.....	Lynchburg, O.
Cline & Fields.....	Camden, O.
Foster, A. E.....	New Salem, O.
Kennel, Jos. A.....	Eaton, O.
Mahan Bros.....	Osborn, O.
McLaughlin, C. J.....	Pleasantville, O.
Ross, C. B.....	Blanchester, O., R. R. 5
Stemen, E. C., & Sons.....	Middlepoint, O.
Watt & Foust.....	Cedarville, O.
Whittier, W. P.....	Galena, O.

## HAMPSHIRE.

Essig, Willie.....	Tipton, Ind.
Rice, C. S.....	Spencer, O.

## POLAND CHINAS.

Beatty, C. M., & F. A.....	Orient, O.
Becker, H. E.....	Carroll, O.
Black, G. A.....	Quincy, O.
Brown, M. C., & Son.....	Martinsville, O., R. R. 1
Cox, Gilbert.....	Camden, O.
Doyel, John.....	Bloomington, O.
Fent, E. B., & Sons.....	Kenton, O.
Foster, E. W.....	New Carlisle, O.
Garvey, J. Walter.....	Auburn, Ill.
Grieve, A. C., & Son.....	Xenia, O.
Harmison & Perry.....	Woodstock, O.
Hays, F. M.....	Piketon, O.
Hatcher, L. R.....	Rushsylvania, O.
Hunter, Thomas, & Co.....	Morrow, O.
Jennings, S. E.....	Williamsport, O.
Keller, Chas. E.....	Newark, O.
Keller, E. W.....	Tiffin, O.
Klever, Ed.....	Bloomington, O.
Lukins, Linc.....	Morrow, O.
McLaughlin, L. C.....	Pleasantville, O.
Niles & Goslie.....	Harrod and Kenton, O.
Osburn, F. C.....	Newark, O.
Salmon, John.....	Bloomington, O.
Smith, C. C.....	Plain City, O.
Spurling Bros.....	Pleasant Plain, O.
Stalter, J. A.....	Pataskala, O.
Stemen, E. C., & Son.....	Middlepoint, O.
Stibbs, Lew.....	Morrow, O.
Townsley, J. W.....	Washington C. H., O.
Welch, W. C.....	Harveysburg, O.
Williams Bros.....	DeGraff, O.
Williams, S. P.....	DeGraff, O.
Wiseley, Henry.....	Grover Hill, O.
Woodmansee, Brent.....	Highland, O.

## TAMWORTHS.

Ford, Charles.....	Mortonsville, Ky.
Thornber, Frank.....	Carthage, Ill.

## YORKSHIRES.

Kite, F. E.....	St. Paris, O.
Miner, W. H.....	Chazy, N. Y.
Wheeler Homestead, The.....	Kanona, N. Y.

## INDEX TO EXHIBITORS—Continued.

## SHEEP.

## CHEVIOTS.

Name.	Postoffice.
Boyd & King.....	Hillsboro, O.
Calland, W. D., & Son.....	DeGraff, O.
Parnell, G. W.....	Wingate, Md.
Postle, F. L., & Sons.....	Camp Chase, O.

## COTSWOLDS.

Bryan, Daniel.....	Portland, Ind.
Nash Bros.....	Tipton, Ind.

## DORSETS

Cherry, H. H.....	Xenia, O.
Cooper & Nephews.....	Chicago, Ill., 177 Illinois St.
Eager, F. E., & Son.....	Howell, Mich.
Fillmore Farms.....	Bennington, Vt.
Henderson, J. B.....	Burgettstown, Pa.
Leet, Chas., & Son.....	Mantua, O.
Miner, W. H.....	Chazey, N. Y.
Nash Bros.....	Tipton, Ind.

## FAT SHEEP.

Cooper & Nephews.....	Chicago, Ill., 177 Illinois St.
Fielder, A. C.....	DeGraff, O.
Fillmore Farms.....	Bennington, Vt.
Henderson, J. B.....	Burgettstown, Pa.
Nash Bros.....	Tipton, Ind.
Postle, T. D.....	Camp Chase, O.
Postle, F. L., & Sons.....	Camp Chase, O.
Watt, R. C., & Son.....	Cedarville, O.

## FRENCH MERINO—RAMBOUILLET.

Highslip, J. F.....	Kenton, O.
Kinnert, J. P.....	New Washington, O.
Lincoln Bros.....	Milford Center, O.
Lovett, J., & Sons.....	Quincy, O.
McMullan, J. H.....	Woodstock, O.
Moore, E. M.....	Wixon, Mich.
Orth & Mathews.....	McGuffey, O.
Scott, J. K.....	Murfresboro, Tenn.
Shaw, J. M., & Son.....	Edison, O.
Shaw, L. W.....	Pottersburg, O.
White, W. L.....	Johnstown, O.

## HAMPSHIRE DOWNS.

Artz, P. W.....	Osborn, O.
Cherry, W. J.....	Xenia, O.
Cooper & Nephews.....	Chicago, Ill., 177 Illinois St.
Judd, C. O.....	Kent, O.
Mitchell, C. L.....	Lucas, O.
Taylor, R. E.....	Sidney, O.

## LINCOLN.

Bickett, J. R.....	Xenia, O., R. R. 9
Cooper & Nephews.....	Chicago, Ill., 177 Illinois St.
Fielder, A. C.....	DeGraff, O.
Lile, W. A., & Sons.....	West Liberty, O.
Rice, C. S.....	Spencer, O.

## INDEX TO EXHIBITORS—Continued—SHEEP—Continued.

## MERINOS.

Name.	Postoffice.
Barker, Clarence W.....	Rochester, N. Y., R. R. 6
Bell, C. H.....	Ashley, O., Classes A, B & C
Bell, D. K.....	Rochester, N. Y., R. R. 6—A & B
Bissell, E. N.....	East Shoreham, Vt.—A & B
Bishop, W., & Son.....	Delaware, O.—A & B
Blamer, S., & Son.....	Johnstown, O.—A, B & C
Cook, W. N., & Son.....	New London, O.—B & C
Deeds, J. J., & Son.....	Pataskala, O.—A, B & C
Dean, A. H., & Son.....	West Mansfield, O.—A, B & C
Freed Bros.....	Lancaster, O.—B & C
Gambler, A. F.....	Wakeman, O.—A, B & C
Gosch, Fred.....	Chicago, O.—B & C
Harris, W., & Son.....	Edison, O.—B & C
Johnson, J. P.....	Cadiz, O.—C
Lovett, J., & Sons.....	Quincy, O.—A, B & C
Moore, E. M.....	Wixon, Mich.—A & B
Queen & Fawcett.....	Chesterhill, O.—A & B
Robertson, J. W.....	Cadiz, O.—A, B & C
Russell, F. H.....	Wakeman, O.—C
Shank, G. A.....	Pataskala, O.—A, B & C
Sheets, C. H.....	Sunbury, O.—A & B
Swetland, H. C.....	Mt. Vernon, O.—B & C
Walker, J. F.....	Gambler, O.—B & C
Williamson, R. D.....	Xenia, O.—A, B & C
Williamson & Robbins.....	Xenia, O.—A, B & C
Wilson, J. M.....	Fredericktown, O.—A, B & C
Wilson, W. E.....	Marengo, O.—B & C
Work, G. D.....	Galena, O.—C

## OXFORD DOWNS.

Cooper & Nephews.....	Chicago, Ill., 177 Illinois St.
Heskett, G. W., Jr.....	Fulton, O.
Rose, W. A.....	Norwalk, O.
Williamson, J. C., & Sons.....	Xenia, O.

## SHROPSHIRE DOWNS.

Cooper & Nephews.....	Chicago, Ill., 177 Illinois St.
Erdenheim Farm.....	Pontiac, Mich., R. R. 3
Harmison & Perry.....	Woodstock, O.
Judd, C. O.....	Kent, O.
Kelter, J. D.....	Xenia, O.
Palmer, W. F., & Son.....	Pataskala, O.
Postle, F. L., & Sons.....	Camp Chase, O.
Postle, Walter D.....	Camp Chase, O.
Stallsmith, Geo. E.....	Urbana, O.
Taylor, R. E.....	Sidney, O.
Wardwell, Henry L.....	Springfield Center, N. Y.

## SOUTH DOWNS.

Compton, W. H., & Son.....	Monroe, O.
Cooper & Nephew.....	Chicago, Ill., 177 Illinois St.
Freed Bros.....	Lancaster, O.
Leet, Chas., & Son.....	Mantua, O.
Mitchell, C. L.....	Lucas, O.
Nichols, G. M.....	Cardington, O.
Postle, T. D.....	Camp Chase, O.
Stuckey, Chas. J., & Son.....	Mechanicsburg, O.
Watt, R. C., & Son.....	Cedarville, O.

## INDEX TO EXHIBITORS—Continued—SHEEP—Concluded.

## EXHIBITS OF WOOL.

Name.	Postoffice.
Cherry, W. J.....	Xenia, O.
Gambier, A. T.....	Wakeman, O.
McMullan, J. H.....	Woodstock, O.
Postle, Ralph.....	Camp Chase, O.
Postle, F. L., & Sons.....	Camp Chase, O.
Robertson, J. W.....	Cadiz, O., R. R. 2
Ross, L. H.....	Bucyrus, O.

## POULTRY.

Adams, T. E.....	Newark, O.
Anthony, Fred.....	North Lawrence, O.
Barnes, P. N.....	Troy, O.
Bedford, H. M.....	Strongsville, O.
Beusch Bros.....	Rocky Ridge, O.
Bockley, Wm. L.....	Ashland, O.
Brown, G.....	Mt. Gilead, O.
Burkholder, H.....	Clyde, O.
Cadwallader, W.....	Lynchburg, O.
Caldwell, R. C.....	Lyndon, O.
Campbell, Arthur.....	Ashland, O.
Cary, L. G.....	Trimble, O.
Cast, G. W.....	Blanchester, O.
Clark, A. G.....	Willoughby, O.
Clemans, T. M.....	Mechanicsburg, O.
Cline, L. W.....	Greenwich, O.
Close, H. M.....	Newark, O., 173 Tenth St.
Coleman, Joe.....	Carey, O.
Covert, D. M.....	Willoughby, O.
Cram, C. E.....	Carey, O.
Darst, Chas.....	Jacksonville, O.
Davidson, Edw.....	Carey, O.
Dumond, W. A.....	Columbus, O., 671 Wilson Ave.
Eager, F. E., & Son.....	Howell, Mich., R. R.
Eddy, E. E.....	Trimble, O.
Farber, E. G.....	East Sparta, O.
Farber, I. M. & J. W.....	Sandyville, O.
Frank & Son, J.....	Akron, O.
Gillman, P. W.....	Rittman, O.
Gines, W. H.....	Tiro, O.
Harrison, S. R.....	Shelby, O.
Hartman Stock Farm.....	Columbus, O., Poultry Dept.
Helman, C. W.....	Waverly, O.
Henry, S. W.....	Columbus, O., Station C
Hermann, A. A.....	Columbus, O.
Knapp, H. H.....	Tiro, O.
Koontz, Ray.....	Ashland, O.
Lantz, E. H.....	Trimble, O.
Larason, E. M.....	Newark, O.
Lehne, Adolph.....	Mechanicsburg, O.
Leibold, Harry.....	Delaware, O.
McClave, Chas.....	New London, O.
McCoole, J. B.....	Troy, O.
Miy, E. A.....	Galena, O.
Mahon, Mrs. J. F.....	Piqua, O.
Mahon, J. F.....	Piqua, O.
Mangaus, L. D.....	Delaware, O.
Mason, G. S.....	Ashland, O.
Merkel, S. C.....	Crestline, O.
Miles, O. E.....	Columbus, O.

## INDEX TO EXHIBITORS—Continued—POULTRY—Concluded.

Name.	Postoffice.
Miller, H. C.....	Akron, O., 240 E. York St.
Miller, A. G.....	Hebron, O.
Myers, M. M.....	Marysville, O.
Nash, M. J.....	Toledo, O.
Pfouts, P. R.....	Bucyrus, O.
Ratcliff, S. M.....	Kingsman, Ind.
Rice, C. S.....	Spencer, O.
Roloson, E. P.....	Delaware, O., R. R. 4
Ross & Sons, J. R.....	Blanchester, O.
Sabin & Goldner.....	Warren, O.
Sayre, J. H.....	Trimble, O.
Scheibell, W. O.....	Columbus, O.
Schenck, E. O. & H. A.....	Columbus, O.
Shiffler, A. J.....	Ashland, O.
Shirkey, F. P.....	Jacksonville, O.
Show, M. B.....	Cardington, O.
Sites, F. C.....	North Dover, O.
Skeen, James.....	Clintonville, O.
Smith, C. W.....	Cardington, O.
Tannenbaum Farms.....	Willoughby, O.
Twin Oaks Farm.....	Sargents, O.
Watts, W. R.....	Columbus, O.
Williams, Gerald.....	Wellington, O., R. R. 3
Wilson Bros.....	Springfield, O.
Wilson, Ralph.....	Bloomville, O.
Woodworth, D. & W. H.....	Delaware, O.
Wurst, S. E.....	Elyria, O.
Yocum & Bros., J. D.....	Mechanicsburg, O.

## FARM PRODUCTS.

Anderson, J. L.....	Gahanna, O.
Bartholomew, F. J.....	Huntsburg, O.
Beach, Mrs. T. A.....	Delaware, O., R. R. 3
Bieber, Mrs. Henry.....	Delaware, O., R. R. 2
Breece, C. C.....	Delaware, O.
Coburn, F. J.....	Mechanicsburg, O., R. R. 3
Coyner, D. G.....	Lyndon, O., Box 57
Craig, Hilas E.....	Groveport, O.
Deal, R. H.....	Marysville, O., R. R. 3
Deal, Jas. L.....	Marysville, O., R. R. 3
Fent & Sons, E. B.....	Kenton, O.
Goodrich, Jessie.....	Powell, O.
Hadler, Fred.....	Greenleaf, Wis.
Hamblin, Mrs. Caroline.....	Columbus, O., 1021 Bellows Ave.
Holland, Geo. W.....	Shepard, O.
Hush, John, Jr.....	New Dover, O.
Husted, Elmer.....	Husted, O.
Jackson, Walter.....	Powell, O.
Kalb, T. D.....	Groveport, O.
Keckley, I. B.....	Marysville, O., R. R. 3
Keckley, A. S.....	Marysville, O.
Keckley, J. L.....	Marysville, O.
Kraner, Harry W.....	Marion, O.
Leavitt, M. J.....	Mechanicsburg, O.
Leavitt, M. J. & C. E.....	Mechanicsburg, O.
Leibold, Harry.....	Delaware, O.
Lile & Son, W. A.....	West Liberty, O.
McConnell, C. M.....	Woodstock, O.
Miller, H. C.....	Akron, O.

## INDEX TO EXHIBITORS—Continued—FARM PRODUCTS—Concluded.

Name.	Postoffice.
Pearce, Albert.....	Groveport, O.
Perkins, C. F.....	Columbus, O., 1208 Neil Ave.
Powell, Howard.....	Newark, O.
Powell, A. H.....	Newark, O.
Purks, J. T.....	Newark, O., R. R. 3
Rice, C. S.....	Spencer, O.
Scott, G. W.....	Lancaster, O.
Springwater Creamery.....	Reynoldsburg, O.
Strong, E. J.....	Huntsburg, O.
Tillotson, Grant E.....	Brunswick, O., R. R. 1
Tobias, J. H.....	Gilboa, O.
Tobias, W. H.....	Gilboa, O.
West Jefferson Creamery Co.....	Columbus, O., 272 N. Third St.
Whipps, W. D.....	Marion, O.
Whipps, F. M.....	West Mansfield, O.
Wildman, G. W.....	Springfield, O., R. R. 5
Zehring, E. L.....	Germantown, O.
Zehring, Oscar O.....	Germantown, O.

## HORTICULTURAL.

Boehme, Alvina.....	Columbus, O., 866 E. Fulton St.
Bookwalter, Harrison.....	Hallsville, O.
Brennaman, E. A.....	Camp Chase, O.
Burkholder, H.....	Clyde, O.
Counter, C. W.....	Toledo, O.
Cox, U. T.....	Proctorville, O.
Cox, E. G.....	Proctorville, O.
Cushman Gladiolus Co.....	Sylvania, O.
Eaton, J. P.....	Proctorville, O., R. R. 1
Farnsworth, W. W.....	Waterville, O.
Fridley.....	Ashville, O., R. R. 2
Gill, R. A.....	Port Clinton, O.
Hagler, Moses A.....	Xenia, O.
Hall, Will F.....	Columbus, O., Station A
Howard, Mrs. John.....	Conesville, O.
Hudson, R. L.....	Delaware, O.
Hunt, Lewis.....	Proctorville, O.
Hutchinson, Fred.....	Clyde, O.
Hutchinson, Mabel.....	Clyde, O.
Johnson, Mrs. T. S.....	Port Clinton, O., R. R. 1
Kiefaber, H. C.....	Frankfort, O.
Kennedy, Mrs. T. H.....	Columbus, O., 394 W. 3rd Ave.
Livingston Seed Co.....	Columbus, O., N. High St.
McCown, B. F.....	Proctorville, O.
Montgomery, Cary W.....	Newark, O.
Montgomery, Martha A.....	Newark, O.
Myrtletree Fruit Farm.....	St. Paris, O.
Ortman, W. H.....	Chillicothe, O.
Peterson, M. L.....	Frankfort, O.
Pollock, L. B.....	Milford, O., R. R. 1
Riebel, Lutie.....	Galloway, O.
Schmitkons, H. W.....	Lorain, O., R. R. 2
Schmitkons Bros.....	Lorain, O., R. R. 2
Shively, M. I.....	Chillicothe, O.
Stewart, Mary.....	Jacksontown, O.
Stokes, J. A.....	Fremont, O.
West, W. H.....	Chillicothe, O.

## INDEX TO EXHIBITORS—Continued.

## WOMAN'S BUILDING.

Name.	Postoffice.
Ackley, Alice.....	59 N. Champion Ave., City
Ackley, Caroline G.....	59 N. Champion Ave., City
Armstrong, Mrs. C. S.....	37 W. Third Ave., City
Augustus, Mrs. C.....	383 Abbott Ave., Indianola, City
Baker, Mrs. Chas. S.....	Morrow, O.
Bates, Mrs. Wesley.....	385 Woodland Ave., City
Baxter, Blanche.....	Pekin, Ill.
Bieber, Mrs. Henry.....	Delaware, O., R. R. 3
Bieber, Miss Minnie.....	Delaware, O., R. R. 3
Birkenbach, Mrs. Corrinne.....	729 Mohawk St., City
Boardman, Mable.....	367 W. Sixth Ave., City
Bonner, Mrs. Louise.....	219 Pearl St., Marion, O.
Bothme, Alvina.....	866 Fulton St., City
Bowman, Mrs. Mae.....	235 Hamilton Ave., City
Bretz, Mrs. R. C.....	621 Madison Ave., Sandusky, O.
Brittian, Mrs. Y. E.....	120 Shaw Ave., Dayton, O.
Brodbeck, Augusta.....	693 Livingston Ave., City
Brossman, Mrs. C. E.....	653 E. Third Ave., City
Brown, Mrs. J. C.....	965 Oak St., City
Bryson, Mrs. F. J.....	194 E. Duncan St., City
Buck, Mrs. E.....	215 Arlington Ave., Lockland, O.
Buckner, Mrs. Ada.....	150 Detroit Ave., City
Burrell, Mrs. E. J.....	160 Warren St., City
Carver, Miss Rachel B.....	Fallsington, Pa., Bucks Co.
Clutter, Mrs. M. B.....	Pataaskala, O., R. R. 3
Cochran, Mrs. William.....	121 Innis Ave., City
Cole, Mrs. J. Wendell.....	Elmwood, O., Franklin Co.
Colley, Mrs. P. M.....	284 E. Long St., City
Connell, Mrs. R. M.....	182 S. 19th St., City
Covault, Mrs. W. H.....	Mechanicsburg, O.
Covault, Amelia D.....	Mechanicsburg, O.
Covault, Mrs. L. C.....	Mechanicsburg, O.
Cowser, Mrs. H. L.....	383 Twelfth Ave., City
Creamer, Mrs. Cora L.....	143 W. High St., Springfield, O.
Creighton, Mrs. S. E.....	65 E. Third Ave., City
Dale, Mrs. Alice.....	395 S. 3rd St., City
Dale, Mrs. R. A.....	275 Fourteenth Ave., City
Davidson, Mrs. Lillie M.....	119 Innis Ave., City
Davis, Lurah C.....	1043 Oak St., City
Dixon, Alice.....	Croton, O.
Doster, Mrs. J.....	Chillicothe, O.
Doster, Marjorie A.....	Chillicothe, O.
Earnest, Mrs. M. E.....	1059 E. Long St., City
Earnest, Meta.....	1059 E. Long St., City
Elterman, Augusta.....	Hilliard, O., R. R. 5
Ellsworth, Mrs. Grace.....	49 Price Ave., City
Evans, Bess E.....	Delaware, O.
Evans, Edna.....	1100 N. High St., City
Fenstermacher, Chrissie.....	Springfield, O.
Ferguson, Mary.....	1343 Oak St., City
Fern, Miss Fannie.....	Groveport, O.
Fisher, Catherine A.....	400 Grove St., City
Fisher, Mrs. Nettle.....	774 Sullivant Ave., City
Fleming, Mrs. Bertha.....	Hanover, O.
Fogle, Mrs. Clara.....	Mt. Gilead, O.
Fox, Viola R.....	305 S. Yellow Springs St., Springfield, O.
Fox, Miss Alice N.....	305 S. Yellow Springs St., Springfield, O.
Frater, Irene.....	391 Morrill Ave., City
Frost, Mrs.....	Toledo, O.
Fuller, Lulu.....	895 Dennison Ave., City
Garver, Margaret.....	Mt. Gilead, O.
Gearhart, Ivy.....	116½ N. Washington St., Van Wert, O.



## INDEX TO EXHIBITORS—Continued—WOMAN'S BUILDING—Continued.

Name.	Postoffice.
George, Gertrude.....	393 Taylor Ave., City
Graham, Mrs. E. L.....	278 Fourteenth Ave., City
Gregg, Mrs. Laura.....	Washington C. H., O.
Greiner, Mrs. Ed.....	Delaware, O.
Greiner, Miss Lillie.....	Delaware, O.
Greiner, Anna M.....	45 E. Maynard Ave., City
Greiner, Mrs. A. A.....	1873 Long St., City
Grice, Mrs. F. C.....	1045 Hunter Ave., City
Groom, Mrs. Mattie.....	774 Brock St., City
Gugel, Katherine.....	Dayton, O.
Hain, Mrs. R. P.....	"The Chelsea," 70 Douglas St., City
Hall, Darris V.....	Columbus, O., Station A
Hall, Edith Elliot.....	53 E. Livingston Ave., City
Hall, Mrs. Mattie.....	838 W. High St., Lexington, Ky.
Hamblin, Mrs. Caroline.....	1021 Bellows Ave., City
Harris, Charlotte M.....	241 S. Yellow Springs St., Springfield, O.
Harris, Hester C.....	241 S. Yellow Springs St., Springfield, O.
Hatfield, Mrs. Geo. W.....	Crawford and Ross Streets, City
Hedges, Maude.....	Ashville, O.
Helman, Miss Elizabeth.....	393 Thurman St., City
Himmeger, Mrs. W. A.....	677 Park St., Marion, O.
Himmeger, Miss Carrie.....	677 Park St., Marion, O.
Hogan, Florence.....	161 N. Grant Ave., City
Hood, Miss Mint.....	1092 E. Rich St., City
Huckstep, Mrs. L. C.....	Bowling Green, Mo.
Huckstep, Elsie.....	Bowling Green, Mo.
Human, Hazel.....	118 W. 7th St., Sedalia, Mo.
Hunter, Mrs. Chas. N.....	Springfield, O., R. R. 5
Hunter, Ruth.....	Springfield, O., R. R. 5
Hussey, Maud C.....	Pekin, Ill.
Jefferson, Mrs. O. H.....	211 E. Herman Ave., Dayton, O.
Jennings, Mrs. N. H.....	4232 Delaney St., Cincinnati, O.
Jennings, May.....	4232 Delaney St., Cincinnati, O.
Jennings, Mrs. J. C. L.....	4232 Delaney St., Cincinnati, O.
Johnson, Miss M.....	142 S. Jefferson St., Dayton, O.
Johnson, L. V.....	919 N. Main St., Dayton, O.
Johnson, Anna.....	919 N. Main St., Dayton, O.
Jones, Mrs. Mary.....	167 Hayden Ave., City
Jones, Clara L.....	67 W. Central Ave., Delaware, O.
Jones, Mrs. James S.....	64 W. 9th Ave., City
Kemp, Mrs. G. W.....	433 W. 4th Ave., City
Kennedy, Mrs. R. A.....	36 W. Lane Ave., City
King, Mrs. G. A.....	24 W. 4th St., Dayton, O.
Koerner, Mrs. A. M.....	589 Linwood Ave., City
Krels, Mrs. John F.....	Marion, O.
Larkin, Laura A.....	South Charleston, O.
Leigh, Elizabeth.....	Groveport, O.
Lewis, Mrs. F. B.....	539 S. 18th St., City
Lybarger, Mrs. B. E.....	1298 Highland St., City
McCord, Mrs. J. C. 1.....	Ashville, O.
McDonald, Mrs. J. A.....	173 S. 3rd St., Ironton, O.
McDonald, Mrs. Jessie.....	501 Armstrong St., City
Matson, Grace B.....	Ashtabula, O.
Mawhoor, Mrs. Bert.....	591 W. Town St., City
Miller, Mrs. A. M.....	637 Sycamore St., Washington C. H., O.
Miller, Mrs. Chas. C.....	513 W. 6th Ave., City
Miller, Mrs. Sarah E.....	105 Stinges Ave., Mansfield, O.
Miller, Mrs. O. J.....	Mt. Gilead, O.
Mitchell, Martha.....	Chestnut St., Xenia
Mosteller, Carrie F.....	105 E. Church St., Newark, O.
Mosteller, Eva B.....	105 E. Church St., Newark, O.
Mosteller, Emily H.....	Newark, O.
Myers, Maud.....	Roundhead, O., R. R. 1

## INDEX TO EXHIBITORS—Continued—WOMAN'S BUILDING—Concluded.

Name.	Postoffice.
Nastri, Anita.....	86 W. Rich St., City
Nickerson, Miss Lou M.....	.....Circleville, O.
Nusbaum, Miss Carrie.....	693 E. Main St., City
Ott, Mrs. J. C.....	Hartman Stock Farm, S. Columbus, O.
Oyler, Mrs. Frank L.....	439 Linwood Ave., City
Parker, Mrs. J. W.....	19 N. Liberty St., Delaware, O.
Parker, Florence.....	278 Fourteenth Ave., City
Patrick, Mrs. Nora.....	1272 Franklin Ave., City
Peck, Mrs.....	1369 Forsythe Ave., City
Phillips, Mrs. H. F.....	537 S. 18th St., City
Plotner, Inez E.....	West Mansfield, O., Logan Co.
Porter, Mrs. Della.....	1769 Neil Ave., City
Potter, Cornelia.....	Springfield, O., R. R. 1, Halac Farm
Pratt, Mrs. O.....	Spring Prairie, Wis.
Pries, Mrs. R. W.....	365 W. 4th Ave., City
Rees, Miss Neva.....	412 W. 8th Ave., City
Roberts, Catherine.....	502 S. Ohio Ave., City
Russell, Mary W.....	441 E. Grand Ave., Springfield, O.
Schelbell, Mrs. W. O.....	230 W. 9th Ave., City
Scott, Miss Anna.....	1274 Summit St., City
Scott, Miss Daisy M.....	1274 Summit St., City
Selders, Mrs. M. M.....	103 E. Lafayette, Greenfield, O.
Sherman, Miss Ruth.....	244 N. 20th St., City
Shipman, Mrs. J. W.....	126½ E. High St., Springfield, O.
Shotts, Anna.....	661 Bank St., City
Siebert, Mrs. C. M.....	330 Meigs Ave., Jeffersonville, Ind.
Simon, Miss Lucile.....	326 N. Columbus St., Gallon, O.
Smith, Estelle C.....	127 Blaine Ave., Marion, O.
Smith, Mrs. Anna.....	277 E. Lafayette St., City
Smith, Mrs. M. A.....	2324 Plover Ave., St. Louis, Mo.
Sprague, Mrs. F. W.....	.....Springfield, O.
Steele, Mrs. B. J.....	159 Winner Ave., City
Stewart, Mary A.....	Jacksontown, O.
Stewart, H. E.....	Thornville, O., R. R. 5
Tarbert, F. A.....	1059 Sullivan Ave., City
Walter, May.....	.....Lancaster, O.
Warman, Miss L. P.....	4819 Pine St., Norwood, O.
Watson, Mrs. John.....	.....Baltimore, O.
Watson, Mrs. S. A. ....	1515 S. 17th St., Springfield, Ill.
Weekly, Mrs. C. C.....	.....Highland, W. Va.
Wigginton, A. B.....	116 E. Noble St., City
William, Mrs. Geo. F.....	1573 S. High St., City
Wilson, Helen.....	142 S. Jefferson St., Dayton, O.
Wilson, Ettie.....	4921 Oak St., Norwood, O.
Wilson, Mrs. J. W.....	4921 Oak St., Norwood, O.
Wiltberger, Mary E.....	1897 N. 4th St., City
Wiltberger, Virginia.....	1897 N. 4th St., City
Wolf, Miss Mary.....	866 Summit St., City
Wright, P. E.....	Columbus, O., Station D
Young, Mrs. C. F.....	Columbus, O., Box 783, Station B
Young, Mrs. J. W.....	763 William St., Delaware, O.
Young, Miss Grace E.....	850 Oak St., City
Zumkeller Louise.....	322 Third Ave., Dayton, Ky

## INDEX TO EXHIBITORS—Concluded.

## FINE ART.

Name.	Postoffice.
Akerly, Ed. E.....	Zanesville, O.
Bartholomew, F. J.....	Huntsburg, O.
Beggs, Miss Orpha.....	702 Cherry St., Findlay, O.
Biddle, Miss M. A.....	110 W. First Ave., City
Birmingham, T. W.....	Columbus, O.
Bolander, Karl.....	723 Girard Ave., Marion, O.
Bowman, Mrs. L. A.....	46 W. 10th Ave., City
Bowman, Miss Ruth.....	46 W. 10th Ave., City
Brenneman, E. A.....	Camp Chase, City
Brown, Amelia.....	1371 Highland St., City
Burrell, Arthur C.....	194 E. Duncan St., City
Carver, Miss Rachel B.....	Fallsington, Pa., Bucks Co.
Cissna, Lulu.....	419 North St., Washington C. H., O.
Clauser, Alfred.....	797 S. 17th St., City
Coyner, D. J.....	Box 57, Lyndon, O.
Dixon, Alice.....	Croton, O.
Downey, Minnie.....	35 N. Third St., Newark, O.
Drake.....	1363 Atcherson St., City
Fenstermacher, Henry.....	Springfield, O.
Ferguson, C. B.....	1343 Oak St., City
Frankenberg, Paul.....	Shepard, O., R. R.
Freshwater, Elizabeth.....	160 W. Park Ave., City
Garver, Margaret.....	Mt. Gilead, O.
Goodrich, Jessie.....	Powell, O.
Greiner, A. A.....	1873 Long St., City
Hall, Will F.....	Columbus, O., Station A
Harmer, Lillian M.....	74 N. Monroe Ave., City
Helwig, Miss G.....	Cincinnati, O., Lion Bldg.
Hill, Earl H.....	229 N. 17th St., City
Holton, Mrs. Winifred.....	611 N. Wittenberg Ave., Springfield, O.
Ingeram, Miss Nina.....	980 Ellsworth Ave., City
Jones, Edward.....	Linden Heights, O.
Kiebling, Margaret.....	3 Sheaf St., Portsmouth, O.
Knecht, G. F.....	623 E. Mound St., City
Kunkle, Miss Alice.....	139 W. Water St., Greenville, O.
Larkin, Laura L.....	South Charleston, O.
Lied, May Eva.....	Columbus, O.
Ludwig, Amelia E.....	423 S. Champion Ave., City
McGraw, John.....	232 Chittenden Ave., City
Meyers, Bertha C.....	363½ E. Main St., City
Miller, H. C.....	Akron, O.
Morris, Wm., Society.....	40. S Third St., City
Ogier, A. C.....	11½ S. High St., City
Ogier, Mrs. A. C.....	11½ S. High St., City
Oppenheimer, Jenette.....	330 S. State St., Marion, O.
Patterson, Lena E.....	Athens, O.
Piersche, John N.....	150 Maynard Ave., City
Posey, F. F.....	637 Nell Ave., City
Price, Frank C.....	80½ N. High St., City
Russell, Edward Charles.....	203 E. Grand Ave., Springfield, O.
Sackett, Miss Florence.....	1028 Dennison Ave., City
Sibley, Ferol.....	103 W. Patterson St., City
Snyder, Anna.....	33 Sells Court, City
Snyder, Cora V.....	33 Sells Court, City
Snyder, Corynne.....	493 Oakwood Ave., City
Strait John M.....	2413 Nell Ave., City
Strong, E. J.....	Huntsburg, O.
Taylor, Miss Marie.....	24 Frambes Ave., City
Taylor, Miss Marguerite.....	24 Frambes Ave., City
Tillman, Miss Ruth.....	130 E. 11th Ave., City
Watson, Rex.....	Baltimore, O.
Willard, Bert.....	671 N. Fourth St., City



Official Report  
OF THE  
Secretary  
OF THE  
Ohio State Board of Agriculture  
ON  
Commercial Fertilizers  
Licensed to be Sold  
During the Year 1909



*To the Manufacturers, Importers, Agents and Consumers of Commercial Fertilizers:*

This Department submits herewith report of analyses of samples of licensed brands of commercial fertilizers collected by inspectors and sold in Ohio during the year 1909.

SUMMARY OF THE LAW.

The law to regulate the sale of commercial fertilizers in Ohio will be found on the last pages of this report. Special attention is called to the fact that every package shall have printed in a conspicuous place on the outside thereof the number of net pounds, name of brand or trade-mark, name of manufacturer, place of manufacture, and if manufacturer controls or operates branch or subsidiary companies, the name of the manufacturer and the name of the dealer or agent for whom the goods were manufactured.

No false or misleading name, brand or trade-mark shall be used in designating any commercial fertilizer.

Minimum percentages guaranteed ammonia available, potash soluble, phosphoric acid available and phosphoric acid insoluble to be printed on bags, packages or tags attached thereto.

If insoluble phosphoric acid is claimed, give source of the insoluble, whether from animal or mineral matter.

Observance of these conditions of the law will be conducive of good feeling and confidence between this department and parties most interested.

PENALTIES.

Violation of any of the provisions of the Commercial Fertilizer Law is punishable on conviction by a fine for the first offense; for a second or subsequent offense not less than \$200 nor more than \$500, or imprisonment not more than six months, or both; provided that a deficiency of six per cent. or less in the total money value shall not be evidence of criminal intent.

FEEES.

All licenses expire with the calendar year, December 31st; hence any commercial fertilizers found on the market at any time during the year

will require license. Fee is \$20, and same cannot be prorated under the provisions of this act. Persons handling fertilizers should ascertain whether license has been paid to avoid license liability.

#### FERTILIZER SAMPLES CAN BE SENT THIS DEPARTMENT FOR ANALYSIS.

The law provides that any person, not a dealer in or agent for the sale of any commercial fertilizer, who may purchase such fertilizer in this state for his own use and not for sale, may send sample to the secretary of the State Board of Agriculture for analysis.

In selecting sample the greatest care should be taken in order that it may represent fairly and impartially the goods desired to be analyzed.

A small portion should be taken from several sacks and from different places in each sack—top, middle, bottom and sides. This should be thoroughly mixed and portion placed in tin cans or jars, securely sealed and labeled, and one of them sent to secretary of the State Board of Agriculture, express charges prepaid, and accompanied by fee of \$3, as required by law. Sender should plainly mark his name on package, but not name of manufacturer. That can be furnished after analysis has been mailed him.

#### ANALYSIS OF SAMPLES.

Correct analysis of all brands found on the markets of the state, with claims of manufacturers, will be found in this report. In addition to these we print claims of the manufacturers for those brands not found on the markets by the inspectors.

Our deputy inspectors made diligent search of the state, collecting 1,540 samples of fertilizers, but were unable to find samples of all brands licensed—666—as against 564 in 1908. Of the 666 brands licensed analyses of 616 appear in this report.

Inspectors were unable to find the 50 samples not reported, so only claims of manufacturer are printed.

#### OBJECT OF LICENSE.

Law requires commercial fertilizers to be licensed. This Department will analyze the goods as found on the market and publish the results of chemist findings. The purchaser must decide for himself as to the quality of the licensed goods offered for sale.

Only samples found by inspectors on the open market, in the hands of consumer, agent or in transit are reported herein. Neither do we, at the request of the manufacturer, select samples from goods at some particularly designated point.



## VALUATIONS.

Prices included in the valuation table are based on the average market quotations for the year. This is not given with the guarantee that farmers can, under all conditions, purchase fertilizers at these prices, but consider it a fair guide. Amount of claims of manufacturers are figured; also the amount of findings of our chemist. These are calculated on the values given in the table and will serve as ready reference, showing the difference in dollars and cents between the claims and findings.

## DESCRIPTION OF ELEMENTS.

Agricultural chemists of the world have found that plant growth requires three elements of food—nitrogen, phosphorus and potassium. If any of these three elements are lacking in the soil no plant can grow.

*Nitrogen* increases foliage and gives size to the plant. To do this it should be in the most available form. When your crop is yellow and does not grow to size it lacks nitrogen.

*Phosphorus* hastens maturity, and thus often gives size and plumpness to the grain—which makes the ears of corn and heads of wheat fill with plump and ripe kernels. When the plant grows rank and dark green and keeps on growing, but does not mature and produce grain, it lacks phosphorus.

*Potassium* is necessary for the formation of starch and sugar in plants.

## SOIL ELEMENT DEFICIENCY.

*Clay Soils* are generally deficient in nitrogen and phosphorus, but contain potassium. The tendency is for clay soils to bake and get hard, and the addition of a little lime is calculated to correct this.

*Black Soils* are strong in nitrogen, but sometimes short of phosphorus and potassium. Such soils usually need drainage.

*Sandy Soils* are generally deficient in potassium. Roughly speaking they are short on all the soil elements. Here is another case where lime will prove a sweetener and will help to retain moisture.

Approved by Chas. E. Thorne

## USE OF FERTILIZERS.

BY PROF. N. W. LORD.

Commercial fertilizers contain practically nothing of value but phosphoric acid, ammonia and potash. These substances have a regular commercial price like sugar or iron. They are at present in all fertile soils in small amounts. In many soils one or more of them are not present in sufficient amount to give good crops.

Fertilizers are added to supply these deficiencies. It is a waste of money to purchase and add to the soil any of these materials already present in sufficient amount. Certain crops need an extra quantity of one or more of them. Fertilizers will not take the place of proper cultivation. Fertilizers will not take the place of humus or organic matter in the soil.

Ammonia is the most expensive by far of the three essentials. Ammonia can also be supplied to the soil by proper use of clover, cow peas, soy beans and other similar crops. These plants get it from the air. Ammonia can be supplied by manure. Ammonia should only be purchased where farm sources are not properly available. Good farming in part consists in preserving and increasing the natural sources of ammonia on the farm by the use of manure and proper plants in rotation.

Phosphoric acid is needed on most Ohio soils. The amount in the soil cannot be increased by cropping. It usually pays to purchase it. It is especially needed by grain crops. Barnyard manure contains too little phosphoric acid. Its value is greatly increased by adding phosphate to it. Insoluble phosphoric acid like that in raw rock is made available to a considerable extent when mixed with manure, but it is not available alone.

Potash is taken from the soil by hay and straw more than by grain. It is not naturally deficient in most Ohio soils. It is particularly needed by some crops like potatoes and tobacco. Some dark "mucky" soils need it naturally. Selling straw, hay and fodder tends to exhaust the potash from soils.

In building up worn-out soils complete fertilizers may be needed at first to get crops started, but the continued use of them when not accompanied by return of organic matter to the soil by manure or clover will leave the land in worse shape than in the beginning.

The "looks" of the plants will often indicate what is lacking. Ammonia promotes growth, and weak plants and light green foliage often go with lack of it, provided other conditions are right for growth. Lack of phosphoric acid and potash will sometimes show in character of grain as well as yield. Continued use of superphosphate (acid rock) tends to soil acidity. This can be corrected by lime or ground limestone.

## IMPORTANT QUESTIONS RELATIVE TO THE USE OF MANURES AND FERTILIZERS.

BY CHAS. E. THORNE.

1. What is the average composition of a ton of manure?
2. Is manure a well-balanced fertilizer; if not, why?
3. What are the losses of manure in the stable?
4. What are the losses of manure in the barnyard?
5. What are the losses of manure in the field?
6. What is the quantity of manure per animal?
7. What is the difference between "ammonia" and nitrogen?
8. What is the difference between "phosphoric acid" and phosphorus?
9. What is the difference between "potash" and potassium?
10. What is the difference between lime and calcium?
11. What is the difference between quicklime and hydrated lime?
12. What is the difference between quicklime and carbonate of lime?
13. What is the meaning of "nitrate?"
14. What is the meaning of "phosphate?"
15. What is the meaning of "acid phosphate?"
16. What is the meaning of superphosphate?"
17. What is the meaning of "sulphate?"
18. What is the meaning of "muriate?"
19. What are the usual constituents of fertilizers?
20. What is the function of "filler" in fertilizers?
21. How to tell when lime is needed.
22. Name the crops most benefited by lime, and why.
23. Name the reason why phosphorus is usually the first element needed.
24. Name conditions under which potassium is likely to be needed.
25. Name conditions under which nitrogen is likely to be needed.

# ANSWERS TO QUESTIONS RELATIVE TO THE USE OF MANURES AND FERTILIZERS.

BY CHAS. E. THORNE.

## 1. Approximate average composition of manures.

	Pounds per ton.		
	Nitrogen.	Phos. acid.	Potash.
*Horse manure .....	9—10	4—7	10—18
Cow " .....	10	5—7	7—10
**Steer " (fattening) .....	12—18	6—7	7—8
Sheep " .....	30	5	20

2. No, because when produced by growing or milk producing animals a part of the phosphorus of the foodstuffs will be stored in the bones and nerve tissues of the animal or carried away in the milk, thus leaving the manure naturally deficient in this element.

3. If the stable floor is of plank or earth, most, or all, of the liquid will be lost, and this part may contain more than half the total value of the manure. If the manure is allowed to heat in the stable it will lose ammonia to the extent of practically all that contained, and the ammonia constitutes about two-thirds the total value of manure. The Ohio experiments have shown that the loss in manures from steers fed on an earth floor, when there was no heating, may amount to one per cent. per month. (See Bulletin 183, p. 203.)

4. In three months untreated manure exposed in an open barnyard suffered the following losses:

Total organic matter.....	38	per cent.
Total ash .....	17	" "
Total phosphorus .....	23	" "
Water soluble phosphorus.....	29	" "
Total potassium.....	57	" "
Water soluble potassium.....	59	" "
Total nitrogen.....	27	" "
Water soluble nitrogen.....	67	" "

(See Bulletin 183, p. 205.)

Field experiments, continued for 12 years, show that such exposure has caused a loss of at least 25 per cent. in the crop-producing value of the manure. (See Circular 92, p. 28.)

\*Roberts' "The Fertility of the Land."

\*\*Ohio Experiment Station Bulletin 184, p. 302. See also Ohio Experiment Station Bulletin 134, p. 93.

5. If manure is left in piles in the field the organic matter, with its nitrogen, will gradually be converted into gas and escape into the air. As soon as manure is piled this operation begins, and it goes on whenever the temperature within the heap is above the freezing point. In addition to this loss, the fertilizing constituents of such heaps are washed into the soil below with every rain. If manure be at once spread upon the field it will lose only the ammonia that may have already formed in the moist manure. As soon as it becomes dry this loss ceases, and the rains which follow will wash the soluble fertilizing constituents directly into the soil where they are needed. There may be occasional losses by the manure being washed bodily down steep hillsides in heavy rains or melting snows, but the losses from this source under existing Ohio practice are insignificant as compared with those which take place in the stable and barnyard.

6. The daily production of manure is approximately as follows per 1,000 pounds live weight.

Horses .....	50 to 60 pounds
Cows .....	60 to 70 pounds
Fattening steers.....	40 to 50 pounds
Fattening lambs.....	33 pounds

These estimates include bedding at the rate of about 7 pounds of straw per 1,000-pound animal per day. (Roberts' *Fertility of the Land*, and Ohio Exp. Sta. Bulletins 183 and 184.)

7. Ammonia is a chemical compound made up of 14 parts by weight of nitrogen and 3 parts of hydrogen, or about 82 per cent. nitrogen and 18 per cent. hydrogen.

8. Phosphoric acid, as the term is used in fertilizer terminology, is a compound containing 62 parts by weight of phosphorus combined with 80 parts of oxygen, or about 44 per cent. phosphorus and 56 per cent. oxygen.

9. Potash is a combination of the elements potassium and oxygen, containing 78 parts by weight of the former and 16 of the latter, or about 83 per cent. potassium and 17 per cent. oxygen.

10. Lime is a combination of calcium and oxygen, containing 40 parts by weight of the former and 16 parts of the latter, or about 71 1/2 per cent calcium and 28 1/2 per cent. oxygen.

11. Quicklime is freshly burnt lime, and if pure, would have the above composition.

When quicklime is exposed to moisture the lime absorbs about 32 per cent. of its weight of water, the two uniting with great energy and the evolution of heat, and if just the proper quantity of water is used a fine, dry powder results which is known as hydrated lime. The per-

centage composition of hydrated lime is approximately 54 per cent. calcium, 43 per cent. oxygen and 3 per cent. hydrogen.

12. If quicklime be exposed for a long time to the air it not only combines with water but also with carbon dioxide (carbonic acid), becoming carbonate of lime, which is the condition in which it is found in nature as limestone. The percentage composition of pure carbonate of lime is 56 per cent. lime and 44 per cent. carbon dioxide, or 40 per cent. calcium, 12 per cent. carbon and 48 per cent. oxygen. The number of pounds of calcium in a ton of each of these three carriers is, therefore, as follows:

In one ton of quicklime .....	1,430
In one ton of hydrated lime .....	1,080
In one ton of carbonate of lime.....	800

13. A nitrate is a salt formed by the combination of nitric acid with a basic element, such as sodium or potassium, giving nitrate of soda or sodium nitrate, nitrate of potash or potassium nitrate, etc.

14. A phosphate is a similar combination of phosphoric acid with a base, such as phosphate of lime.

15. Acid phosphate is the term used to designate the substance formed by treating the phosphatic rock, found in Tennessee and other southern states, with sulphuric acid, in order to make the phosphorus of this rock (which is phosphate of lime) available to plants, it being insoluble in water in its natural condition. In this treatment approximately equal weight of the ground rock and sulphuric acid are mixed together. Chemical union takes place and the product is acid phosphate.

16. Superphosphate is the term originally used in England to designate the composition now known as acid phosphate.

17. A sulphate is the combination of sulphuric acid with a base such as sodium, calcium or potassium, giving the sulphates of soda, lime and potash.

18. The acid now known as hydrochloric (because it is a compound of hydrogen and chlorine and contains no oxygen, as do sulphuric and phosphoric acids) was originally called muriatic acid, and a muriate is the combination of this acid with a base. The muriate of potash is the principal example of this name. Common salt might be called muriate of soda. In the union of hydrochloric acid with these bases the hydrogen is liberated so that the resulting salt contains only two elements, potassium or sodium combined with chlorine. As the term potash is properly applied only to the combination of potassium with oxygen, and as muriate of potash contains no oxygen, the name is a misnomer. The proper name is potassium chloride for the potassium compound and sodium chloride for common salt.

19. The basal constituent of ordinary fertilizers is a carrier of phosphorus, either the phosphate of lime found as a rock in South Carolina, Florida and Tennessee, or the bones and other wastes of slaughter-houses. To this base is added materials carrying nitrogen or potassium, one or both. The usual carrier of nitrogen is slaughter-house waste, though peat is used in some low-grade fertilizers. Practically the only carriers of potassium in use for this purpose are the muriate of potash or a crude salt called kainit, the world's supply for both of which is drawn from mines at Stassfurt, Germany.

20. There is no place in a properly made fertilizer for any "filler." Acid phosphate and bone meal are dry powders, ready for use alone or for mixing with other materials. Muriate of potash resembles common salt in its appearance and texture, and may be used alone or in mixtures, just as salt might be. Tankage, which is the ordinary carrier of nitrogen used in fertilizers, is made by rendering the waste scraps of meat and tendon of the slaughter-houses to extract the fat and drying and grinding the residue. It is made in various grades and is sold on the basis of the "ammonia" and "bone phosphate" contained. A common grade is called "6 and 35," meaning 6 per cent. "ammonia" and 35 per cent. "bone phosphate." As bone phosphate is about 46 per cent. phosphoric acid and 54 per cent. lime, this grade would carry about 16 per cent. phosphoric acid. Let us now compound a 1-8-1 fertilizer, or a fertilizer carrying in each ton 1 per cent., or 20 pounds of "ammonia," 8 per cent., or 160 pounds of "phosphoric acid," and 1 per cent., or 20 pounds of "potash." The composition of such a fertilizer is shown below.

	Ammonia.	Phos. acid.	Potash.
	Lbs.	Lbs.	Lbs.
Constituents in 1 ton.....	20	160	20
Materials required:			
350 pounds, 6 & 35 tankage.....	21	46	..
820 pounds, 14% acid phosphate.....		114	..
40 pounds muriate of potash.....		...	20
1,210 pounds total.....	21	160	20

Twelve hundred and ten pounds of these mixed materials would, therefore, contain sufficient of the essential constituents to make a ton of fertilizer of the required analysis, and in order to make the farmer think he is getting his money's worth the total weight is made up by adding any refuse that may be convenient. This may be accomplished by using a low grade of phosphate rock for the acid phosphate or by "filling" with ground limestone or with peat. All these methods are

practiced. For example, a dried peat may contain 3 per cent. "ammonia" and  $\frac{1}{3}$  of 1 per cent. "phosphoric acid." Such a "filler" may be used as below:

	Ammonia.	Phos. acid.	Potash.
810 pounds peat.....	24	2	..
1,150 pounds acid phosphate.....		161	..
40 pounds muriate of potash.....		...	20
<hr/>			
2,000 pounds total.....	24	163	20

If the dry peat cost \$2 per ton, the acid phosphate \$17 and the muriate of potash \$50, the cost of the materials required to make a ton of the above compound would be \$11.59.

Ohio peat is being used in large quantities for mixing fertilizers.

21. The first indication of lime hunger in the soil is the behavior of the clover crop. The seed sown in the spring takes root and apparently a perfect stand is obtained. At harvest the land is fairly evenly covered with young clover, but there are patches of greater or less extent, in which the plant seems unthrifty. As the season progresses these patches increase in size and the contrast becomes more apparent. By the following spring these patches are bare of clover, and weeds of various kinds, especially horse sorrel, have taken its place.

The unthriftiness of the clover usually makes its first appearance on the higher and drier lands, and especially on those which have been long in cultivation with scanty manuring. It is also more apparent in dry seasons; in fact, in a season of abundant rainfall throughout the summer it may not be observed, but the general tendency is toward an increasing difficulty in securing satisfactory crops of clover.

It should not be confused with complete destruction of the young plants by late spring frosts, nor with a disease of clover which causes a wilting and browning of the leaves and the appearance of black spots on the stems.

When these conditions are observed on an acid soil, as indicated by the litmus test, it may safely be assumed that lime is needed.

22. Clover first, and corn next, because a crop of clover contains from four to ten times as much lime as either of the cereal crops, and a crop of corn nearly three times as much as one of wheat, and because an alkaline base is essential to the existence of the soil organisms through whose agency nitrogen is fixed in a form available to higher plants. In the case of clover these organisms operate on the free nitrogen of the air in the upper layer of soil and form the nodules on the clover roots, and in the case of corn similar organisms convert the nitrogen of the dead roots and other organic matter of the soil into available form. Lime is both the cheapest and most efficient base for this purpose.



23. In the maturing of the crop about three-fourths of the total phosphorus of the plant is transferred to the grain, while a like portion of the potassium is retained in the stem and leaves. Whether the grain be sold or fed on the farm the result is that most of the phosphorus is carried away, either in the grain itself or in the bones and nerve tissues of the animals fed on it, or in milk. The potassium, however, remains either in the unused straw and stalks or in the manure, since comparatively little of this element is retained in the animal body.

24. When straw and hay as well as grain are sold off the farm the time will come when potassium, as well as phosphorus, must be restored.

25. Nitrogen, like phosphorus, is stored chiefly in the grain, and unless the system of agriculture be such as to restore this element by the frequent growing of leguminous crops and also by the return to the soil of some manure, the time will come when nitrogen also must be purchased. The Ohio Station's experiments indicate that the growing of clover every third year will not maintain the nitrogen supply if the hay crop be removed from the land. (Circular 79, p. 16.)

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## FERTILIZERS.

Roberts Fertilizer Company, of Pittsburg, has on the market a brand known as General Crop Fertilizer—2 per cent. ammonia; 8 per cent. total phosphoric acid, and 2 per cent. potash.

They make no claim for available phosphoric acid. For a complete fertilizer the sum of ammonia, available phosphoric acid and potash must total eleven per cent. The phosphoric acid in this brand is derived from ground unacidulated rock "floats." Of the 8 per cent. total phosphoric acid they state that samples analyzed by their chemist showed 1.70 per cent. available. We would then have a brand of 2 per cent. ammonia, 1.70 per cent. available phosphoric acid and 2 per cent. potash; total 5.70 per cent., instead of 11 per cent. as required.

This brand is being sold in open violation of the law. Including the 6.30 per cent. insoluble phosphoric acid, the commercial value would be \$11.42, yet it is being sold at \$15 net. To bring this brand up to legal requirements, at least 7 per cent. of the phosphoric acid should be available. The commercial value would then be \$16.45.

The objection to this brand is that the sum of ammonia, available phosphoric acid and potash does not total eleven per cent.; the purchaser, on the other hand, is misled in believing he is buying what is known on the market as a 2-8-2 goods.

## FERTILIZER COMMENT.

In order to give purchasers of commercial fertilizer as much information as possible as to who makes and where same is manufactured, the following letters are published, and the same are self-explanatory:

WESTERN UNION CHEMICAL COMPANY, CLEVELAND, OHIO.

A. P. Sandles, Secretary State Board of Agriculture, Columbus, Ohio:

DEAR SIR:—We have your favor of the 25th ult., and in reply thereto we beg to advise that we lease the American Agricultural Chemical Co. factory at Cleveland and Cincinnati for the purpose of manufacturing our own brands, and the manufacture of our brands is done at our own expense and under our own supervision.

Yours truly,

(Signed)

WESTERN UNION CHEMICAL CO.,

Per I. H. K.

W. W. Hathaway, Prop.

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S. M. HESS & BRO., PHILADELPHIA, PA.

Hon. A. P. Sandles, Department of Agriculture, Columbus, Ohio:

DEAR SIR:—Your favor of the 9th instant is duly received and contents carefully noted.

You are correct in your understanding that we own no plants in either Cincinnati or Cleveland. You are incorrect, however, in your understanding that our goods are manufactured by the American Agricultural Chemical Company. Our brands are manufactured at the factories of the American Agricultural Chemical Company at Cleveland and Cincinnati under our own supervision and at our own expense, and this work is carried out under and pursuant to a lease which we have with the American Agricultural Chemical Company.

In view of this situation, it would seem to us as though we have fully complied with your law in branding our bags as we have.

We remain

Yours very truly,

(Signed) S. M. HESS & BRO.

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VALUATIONS OF COMMERCIAL FERTILIZERS.

N. W. LORD, OFFICIAL CHEMIST.

(N. B.—Please preserve this article.)

The valuations attached to fertilizer analyses are intended to represent the cost of the phosphoric acid, potash and ammonia they contain, delivered at Columbus in the raw materials furnishing them plus an al-

lowance of 25 per cent. to cover the mixing of the material and the profit of the manufacturer. Sacking or bagging is not included. This item will mean an additional cost of from \$1.50 to \$1.80 a ton. The cost of the fertilizer elements in the crude materials is estimated as follows: To the average wholesale price for the season as obtained from trade quotations at Chicago and New York, is added the freight for carload lots to Columbus. From the price so obtained the cost of a unit of the material is figured by dividing the cost by the number of units or per cents. which the material contains. This gives the cost per unit at Columbus.

One unit is one per cent. of one ton, or twenty pounds of the substance. Where several materials are used the average price per unit is taken as the basis of valuation. In fixing the valuation to be used in the calculation of the values of mixed fertilizers, 25 per cent. is added to this cost for profit, mixing and distribution.

In obtaining the following values, the nitrate of soda f. o. b. New York was taken at \$2.16  $\frac{2}{3}$  a hundred pounds. Dried blood at \$2.45 per unit, f. o. b. Chicago, and tankage at \$2.40 per unit ammonia and ten cents per unit bone phosphate. These give the average cost of ammonia at \$2.61 per unit f. o. b. Columbus. Rock phosphate, basis of 14 per cent. available, New York rate 58 cents a unit, is equivalent to 87 cents per unit f. o. b. Columbus.

Sulphate of potash, 90 per cent. basis. This would contain 48.7 per cent. actual potash. New York quotations \$2.18  $\frac{2}{3}$  per hundred. Cost per unit in Columbus of actual potash 98 cents.

Muriate of potash, basis 80 per cent., New York quotations \$1.90 per hundred. Actual potash in 80 per cent. muriate 50.5 per cent. Cost per unit in Columbus, f. o. b. Columbus, 83 cents.

The cost of phosphoric acid in bone was estimated as follows: The ground bone, f. o. b. Columbus, on the basis of 4 per cent. ammonia and 50 per cent. bone phosphate, was taken at \$22.75. Calculating the ammonia at \$2.61 a unit leaves \$12.31 for the phosphoric acid. Fifty per cent. bone phosphate is equivalent to 22.9 per cent. phosphoric acid. This would make the phosphoric acid in bone 54 cents a unit.

The value of the phosphoric acid in bone increases with the fineness. In computing the values of bones a difference of 25 per cent. is made between the phosphoric acid in fine bone and the phosphoric acid in medium bone. Adjusting this to an average of 70 per cent. fine gives for the phosphoric acid in medium bone 43 cents per unit and for fine bone 58 cents per unit.

Where acidulated goods are derived wholly from animal matter it is assumed that the insoluble acid has the same value as that in medium bone. Where goods consist of mixed animal and mineral matter the insoluble acid is valued at one-half the price of medium bone.

Adding to the foregoing values 25 per cent. we have the following table of valuations:

	Cost in raw material per unit.	With 25% added cost in mixed goods.	Value per pound cents.
Ammonia .....	\$2.61	\$3.26	16.3
Available phosphoric acid.....	0.87	1.08	5.04
Actual potash in sulphate.....	0.98	1.22	6.1
Actual potash in muriate.....	0.83	1.04	5.2
Phosphoric acid in fine bone.....	0.58	0.72	3.6
Phosphoric acid in medium bone.....	0.43	0.54	2.7
Insoluble phosphoric acid in animal and mineral mixture.....	0.22	0.27	1.3

To the value of the fertilizer calculated from these figures, the cost of sacking should be added, amounting to \$1.60 a ton.

#### TABULATED VALUATIONS OF COMMERCIAL FERTILIZERS FOR THE YEAR ENDING DECEMBER 31, 1909.

NOTE—"Unit" is a trade expression. "Unit" equals twenty pounds commercial fertilizer ingredients. "Unit" means one percentum of a ton. For example: For market quotations ammonia is priced at 16.3 cents per pound. Then twenty times 16.3 cents gives price of a "unit" at \$3.26.

In Table No. 1 which follows the valuation of mixed fertilizers including acid rock and potash, are given, based on the following prices per pound and per unit for the ingredients named.

TABLE NO. 1—MIXED FERTILIZERS.

Ammonia, 16.3 cents per pound, or \$3.26 per unit.  
 Available phosphoric acid, 5.04 cents per pound, or \$1.08 per unit.  
 Insoluble phosphoric acid, wholly mineral, no value.  
 Insoluble phosphoric acid, in mixed animal and mineral, 1.3 cents per pound, or 27 cents per unit.  
 Insoluble phosphoric acid, in bone, 2.7 cents per pound, or 54 cents per unit.

NOTE—Where manufacturer only Claim Total Phosphoric Acid in treated bones, the calculation of the value from their claims is made as in case of Bones in Table No. 2:

Potash (actual) from sulphate, 6.1 cents per pound, or \$1.22 per unit.  
 Potash (actual) from muriate, 5.2 cents per pound, or \$1.04 per unit.

In Table No. 2 are given values of untreated bones, which are computed from the following prices:

TABLE NO. 2—BONES.

Ammonia, 16.3 cents per pound, or \$3.26 per unit.

Phosphoric acid in "fine" bone, 3.6 cents per pound, or 72 cents per unit.

Phosphoric acid in "medium" bone, 2.7 cents per pound, or 54 cents per unit.

Total phosphoric acid in bone where "fineness" not given, 3 1/3 cents per pound, or 67 cents per unit.

Potash, if found present, valued same as in Table No. 1.

In Table No. 3 are given values of the unmixed fertilizing materials, viz: potash salts, nitrate of soda, dried blood, tankage and ashes.

These materials are used in the manufacture of mixed fertilizers. The values given are calculated from the average price for these materials, f. o. b. Columbus, and are as follows for the fertilizing ingredients.

TABLE NO. 3—FERTILIZING MATERIALS—UNMIXED.

Ammonia, 13.05 cents per pound, or \$2.61 per unit.

Total phosphoric acid in bone (untreated) 3 1/3 cents per pound, or 67 cents per unit.

Potash (actual) from sulphate, 4.9 cents per pound, or 98 cents per unit.

Potash (actual) from muriate, 4.4 cents per pound, or 88 cents per unit.

Total phosphoric acid in raw rock, 1.6 cents per pound, or 31 cents per unit.

When these substances are purchased in mixed fertilizers the cost price for the fertilizing ingredients is 25 per cent. greater, not including sacking, which will amount to about \$1.60 a ton.

#### FINANCIAL STATEMENT OF FERTILIZER INSPECTION ENDING DECEMBER 31, 1909.

##### RECEIPTS.

License fees received for 666 brands.....	\$13,320 00
Fees for special analyses.....	332 00
Amount paid into State Treasury.....	\$13,652 00

##### DISBURSEMENTS.

Amount paid N. W. Lord, Chemist, for analyses.....	\$3,956 00
Salary and expense of Inspector W. M. Brown.....	906 22
Salary and expense of Inspector T. L. Calvert.....	712 89
Expense of Inspector E. J. Filbin.....	19 50
Salary and expense of Inspector H. F. Fricke.....	322 54
Salary and expense of Inspector S. K. Johnson.....	123 63
Expense of Inspector R. H. Ramsdell.....	253 15
General expense, supplies, postage, etc.....	107 55

Balance in State Treasury.....	\$6,401 48
	7,250 52
	\$13,652 00

TABULATED ANALYSES AND VALUATIONS OF COMMERCIAL FERTILIZERS FOR THE YEAR ENDING DECEMBER 31, 1909.

All analyses are made by Prof. N. W. Lord, Ohio State University, Columbus, Ohio, Official Chemist.

TABLE I.—MIXED FERTILIZERS.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Percent.	Available.	Insoluble.	Total Percent.	Percent.	Value.		
1	Dissolved Phosphate Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	.....	.....	.....	14.00 14.01	.....	.....	.....	.....	15.12 15.13	..... 1
2	Garden Truck Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	4.00 3.65	..... 11.90	8.00 8.59	..... 9.28	..... 0.42	..... 10.15	7.00 6.63	..... 6.90	28.96 28.50	..... 2
3	Fish, Phosphate and Potash, Tobacco and Potato Food The Jarecki Chemical Co., Sandusky and Cincinnati, O.	Claimed. Found.	1.00 1.05	..... 3.42	8.00 9.18	..... 9.91	..... 0.65	9.00 11.58	4.00 3.93	..... 4.09	16.06 18.07	..... 3
4	Grain and Grass Grower Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	1.00 2.23	..... 7.27	9.00 9.56	..... 10.32	..... 0.31	..... 10.71	2.00 6.17	..... 6.42	15.06 24.32	..... 4
5	Lake Erie Guano with Phosphate and Potash The Jarecki Chemical Co., Sandusky and Cincinnati, O.	Claimed. Found.	1.50 1.40	..... 4.56	8.00 7.86	..... 8.49	..... 2.43	9.00 10.29	2.50 2.30	..... 2.39	16.13 15.44	..... 5
8	Onion and Truck Fertilizer The Wulchet Fertilizer Co., Dayton, O.	Claimed. Found.	2.00 2.07	..... 6.75	8.00 8.08	..... 8.73	..... 3.93	..... 12.01	8.00 7.84	..... 8.15	23.48 24.69	..... 8
9	Peerless Superphosphate The Canton Fertilizer & Chem. Co., Canton, O.	Claimed. Found.	2.00 1.90	..... 6.19	8.00 7.50	..... 8.10	..... 1.28	9.50 9.87	2.00 2.44	..... 2.54	17.65 18.11	..... 9

10	Bash's High Grade Tobacco Special. Bash Fertilizer Co., Ft. Wayne, Ind.	1.50 1.48	8.00 7.93	1.00 0.31	9.00 8.24	5.00 4.79	19.00 18.44	..... 10
11	Hardy's Tankage, Phosphate and Potash. The Smith Agri. Chem. Co., Columbus, O.	1.50 1.28	8.00 7.81	1.00 1.59	..... 9.40	2.00 2.33	15.88 16.45	..... 11
12	Hardy's Tobacco and Potato Special. The Smith Agri. Chem. Co., Columbus, O.	2.00 1.25	8.00 8.98	1.00 1.95	..... 10.93	4.00 2.93	19.59 17.36	..... 12
13	Tobacco and Truck Grower. The Jarecki Chemical Co., Sandusky and Cincinnati, O.	2.00 1.68	6.00 8.43	1.00 1.69	..... 7.00	6.00 3.05	19.24 18.21	..... 13
14	Bash's Blood, Bone and Potash. Bash Fertilizer Co., Ft. Wayne, Ind.	2.50 1.98	8.00 9.43	2.00 2.71	..... 10.00	2.00 2.14	19.41 19.59	..... 14
15	Superphosphate and Potash. The Packers' Fertilizer Co., Cincinnati, O.	..... .....	10.00 10.64	1.00 2.11	..... 12.75	4.00 4.05	14.96 15.70	..... 15
16	Hardy's Corn and Wheat Grower. The Smith Agri. Chem. Co., Columbus, O.	1.00 1.00	8.00 7.07	1.00 1.47	..... 8.54	2.00 3.18	14.25 14.61	..... 16
17	Hardy's Phosphate and Potash. The Smith Agri. Chem. Co., Columbus, O.	..... .....	10.00 9.69	1.00 1.82	..... 11.51	2.00 2.33	12.88 12.89	..... 17
18	Acidulated Phosphate and Potash. The Packers' Fertilizer Co., Cincinnati, O.	..... .....	10.00 10.49	1.00 2.53	..... 13.02	2.00 2.12	12.88 13.63	..... 18
19	Potato, Tobacco and Truck Manure. The Packers' Fertilizer Co., Cincinnati, O.	2.00 1.98	6.00 6.33	1.00 1.31	..... 7.64	6.00 6.85	20.59 22.00	..... 19
20	Miami Phosphate The Wulchet Fertilizer Co., Dayton, O.	1.00 1.15	9.00 8.29	1.00 2.87	..... 11.16	3.00 2.88	16.10 16.47	..... 20
21	Animal Guano, Phosphate and Potash. The Packers' Fertilizer Co., Cincinnati, O.	1.00 1.15	8.00 7.89	1.00 2.23	..... 10.12	4.00 4.01	16.33 17.04	..... 21
22	Peerless Ohio Grain and Truck Grower. The Canton Fertilizer & Chem. Co., Canton, O.	1.00 1.00	8.00 7.80	1.50 2.01	..... 9.50	4.00 3.81	16.47 15.64	..... 22

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Available.	Insoluble		Total Percent.	Percent.	Value.		
						Percent.	Value.					
23	Number One Guano with Phosphate and Potash The Jarecki Chemical Co., Sandusky and Cincinnati, O. ....	Claimed. Found.	1.00 1.25	..... 4.08	8.00 7.76	..... 8.38	..... 0.63	1.00 2.33	..... 10.09	2.00 2.45	..... 15.64	13.98 23
24	Hardy's Potash Fertilizer. The Smith Agri. Chem. Co., Columbus, O....	Claimed. Found.	1.00 0.90	..... 2.93	8.00 8.31	..... 8.97	..... 0.32	1.00 1.18	..... 9.49	4.00 4.24	..... 16.63	16.33 24
25	Ruby Phosphate The Wuchet Fertilizer Co., Dayton, O.....	Claimed. Found.	1.00 1.08	..... 3.52	9.00 8.03	..... 8.67	..... 0.81	1.00 3.00	..... 11.03	1.00 1.64	..... 14.71	14.02 25
26	Celery and Potato Special. Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	2.00 2.18	..... 7.11	8.00 8.73	..... 9.43	..... 0.41	..... 1.50	..... 10.23	10.00 11.12	..... 28.51	25.56 26
27	Farmers' Choice Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	1.00 0.95	..... 3.10	8.00 7.90	..... 8.53	..... 0.73	..... 2.72	..... 10.62	5.00 5.97	..... 18.57	17.10 27
29	Swift's Truck Grower..... Swift & Company, Chicago, Ill.....	Claimed. Found.	1.00 0.98	..... 3.19	8.00 7.63	..... 8.24	..... 1.31	1.00 2.43	9.00 10.06	4.00 4.00	..... 17.62	17.32 29
30	Swift's Superphosphate Swift & Company, Chicago, Ill.....	Claimed. Found.	2.00 2.08	..... 6.78	8.00 7.09	..... 7.66	..... 2.85	2.00 2.28	10.00 12.37	2.00 2.41	..... 19.80	18.32 30
31	Groves' Wheat and Oats The Groves Co., Cincinnati, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.84	..... 10.63	..... .....	2.00 2.40	12.00 12.24	2.00 2.08	..... 12.79	12.88 31
32	Fox Formula Fox Chemical Co., Louisville, Ky.....	Claimed. Found.	1.00 0.85	..... 2.77	11.00 11.99	..... 12.95	..... .....	..... 1.37	..... 13.36	3.00 3.09	..... 18.26	18.26 32



33	Fox Crop and Tobacco Grower. Fox Chemical Co., Louisville, Ky.	Claimed. Found.	1.00 1.00	3.26 9.55	8.00 10.31	1.25 1.25	..... .....	..... 10.80	4.00 3.09	..... 3.21	16.06 16.78	..... 33
34	Daybreak Special Tobacco Grower. Federal Chemical Co., Louisville, Ky.	Claimed. Found.	1.50 1.48	..... 4.82	8.00 7.19	..... 7.77	..... 1.18	..... 0.32	6.00 6.07	..... 7.41	20.85 20.32	..... 34
35	Daybreak Royal Phosphate. Federal Chemical Co., Louisville, Ky.	Claimed. Found.	..... .....	14.00 15.03	..... 16.23	..... 0.51	..... .....	..... 15.54	..... .....	..... .....	15.12 16.23	..... 35
36	Western Chemical Pioneer Seed Maker. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	1.00 1.03	..... 3.36	8.00 6.96	..... 7.52	1.00 1.79	..... 0.48	2.00 2.23	..... 2.32	14.25 13.68	..... 36
37	Western Chemical Royal Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	10.00 8.88	..... 9.59	1.00 1.92	..... .....	5.00 4.16	..... 4.33	16.00 13.92	..... 37
38	Western Chemical Acidulated Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	10.00 8.91	..... 9.62	1.00 1.89	..... .....	2.00 2.47	..... 2.57	12.88 12.19	..... 38
39	Western Chemical Dissolved Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	14.00 14.55	..... 15.71	1.00 1.85	..... .....	..... 16.40	..... .....	..... .....	15.12 15.71	..... 39
40	Western Chemical Erie Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	1.00 1.00	..... 3.26	8.00 8.18	..... 8.83	1.00 1.85	..... .....	4.00 3.99	..... 4.15	16.33 16.24	..... 40
41	Chicago Fertilizer Co.'s Potato, Truck and Tobacco Fertilizer. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	2.00 1.75	..... 5.71	8.00 8.83	..... 9.54	1.00 1.40	..... 0.38	4.00 4.22	..... 4.39	19.59 20.02	..... 41
42	Chicago Fertilizer Co.'s Diamond Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	14.00 14.26	..... 15.40	1.00 2.30	..... .....	..... .....	..... .....	15.12 15.40	..... 42
43	Chicago Fertilizer Co.'s Diamond Phosphate and Potash. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	10.00 8.63	..... 9.32	1.00 1.40	..... .....	5.00 4.66	..... 4.85	16.00 14.17	..... 43
44	Ohio Farmers' Ammoniated Phosphate and Potash. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	1.00 0.90	..... 2.93	8.00 8.31	..... 8.97	1.00 1.15	..... 0.31	4.00 3.99	..... 4.15	16.33 16.36	..... 44

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Available.		Insoluble		Percent.	Value.		
					Percent.	Value.	Percent.	Value.				
45	Ohio Farmers' Potato and Tobacco Special..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	2.00 1.65	..... 5.38	8.00 8.70	..... 9.40	1.00 1.53	..... 0.41	..... 10.23	4.00 3.68	..... 19.59 19.02	..... 45
46	Ohio Farmers' Corn, Oats and Wheat Fertilizer.. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.50 1.45	..... 4.73	8.00 7.77	..... 8.39	1.00 1.56	..... 0.42	..... 9.33	2.00 2.28	..... 15.88 15.91	..... 46
47	Abbott & Martin's Star Phosphate..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.18	..... 9.91	1.00 1.98	..... .....	..... 11.16	2.00 2.10	..... 12.88 12.09	..... 47
48	Chicago Fertilizer Co.'s Western Phosphate and Potash..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 1.05	..... 3.42	8.00 7.55	..... 8.15	1.00 1.59	..... 0.43	..... 9.14	2.00 1.93	..... 14.25 14.01	..... 48
49	Chicago Fertilizer Co.'s Calumet Phosphate..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.34	..... 10.09	1.00 1.72	..... .....	..... 11.06	2.00 2.12	..... 12.88 12.29	..... 49
50	Special Potato Formula..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 0.90	..... 2.93	6.00 6.04	..... 6.52	..... 0.54	..... 0.15	..... 6.58	10.00 9.77	..... 20.14 19.76	..... 50
51	Calumet Brand Potato, Tobacco and Onion Grower..... Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	2.00 1.85	..... 6.03	8.00 8.22	..... 8.88	1.00 1.40	..... 0.76	..... 9.00	5.00 *6.99	..... 21.80 24.20	..... 51
52	Calumet Brand Special Pure Bone Meal and Potash..... Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.00 1.00	..... 3.26	..... 9.02	..... 9.74	..... 16.33	..... 3.42	20.00 15.35	4.00 5.05	..... 20.82 21.67	..... 52

53	Calumet Brand Bone Phosphate and Potash. Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	.....	.....	10.00	.....	11.46	1.00	.....	11.00	2.00	.....	13.42	.....	53
			.....	.....	10.61	.....	11.46	1.00	.....	0.42	2.84	.....	2.95	14.83	
54	Calumet Brand Wheat, Corn and Oats Special. Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.00	.....	8.00	.....	.....	1.00	.....	9.00	4.00	.....	.....	16.60	.....
			1.00	3.26	5.85	6.32	6.32	1.00	.....	0.26	4.09	.....	4.25	14.09	54
55	Potato and Tobacco Special. Geo. A. Bell, Wheelersburg, O.....	Claimed. Found.	1.00	.....	8.00	.....	.....	.....	.....	10.00	4.00	.....	.....	16.06	.....
			2.90	9.45	9.00	9.72	9.72	3.33	.....	0.90	3.45	.....	3.59	23.66	55
56	Bell's Complete Fertilizer. Geo. A. Bell, Wheelersburg, O.....	Claimed. Found.	1.00	.....	10.00	.....	.....	.....	.....	12.00	2.00	.....	.....	16.50	.....
			1.80	5.87	10.49	11.33	11.33	2.49	.....	0.67	*2.18	.....	2.66	20.53	56
58	Lion Phosphate The Queen City Fertilizer Co., Cincinnati, O...	Claimed. Found.	.....	.....	14.00	.....	.....	1.00	.....	.....	.....	.....	.....	15.12	.....
			.....	.....	13.18	14.23	14.23	2.49	.....	.....	.....	.....	.....	14.23	58
59	Superphosphate and Potash. The Jarecki Chemical Co., Sandusky and Cincinnati, O.....	Claimed. Found.	.....	.....	10.00	.....	.....	1.00	.....	.....	4.00	.....	.....	14.96	.....
			.....	.....	10.90	11.77	11.77	2.05	.....	.....	4.18	.....	4.35	16.12	59
60	Competitor Phosphate The Wulchet Fertilizer Co., Dayton, O.....	Claimed. Found.	.....	.....	10.00	.....	.....	1.00	.....	.....	2.00	.....	.....	12.88	.....
			.....	.....	11.20	12.10	12.10	1.59	.....	.....	1.04	.....	1.08	13.18	60
61	Gem Phosphate The Wulchet Fertilizer Co., Dayton, O.....	Claimed. Found.	1.00	.....	8.00	.....	.....	1.00	.....	.....	5.00	.....	.....	17.10	.....
			1.05	3.42	8.13	8.78	8.78	2.87	.....	.....	4.24	.....	4.41	16.61	61
62	Calumet Brand Dissolved Pure Bone Phosphate. Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.00	.....	18.00	.....	.....	1.00	.....	19.00	.....	.....	.....	23.24	.....
			0.85	2.77	20.47	22.11	22.11	2.56	.....	1.38	.....	.....	.....	26.26	62
63	Wizard Brand Manure. The Pulverized Manure Co., Chicago, Ill.....	Claimed. Found.	2.50	.....	1.00	.....	.....	.....	.....	1.20	1.35	.....	.....	10.88	.....
			2.25	7.34	1.21	1.31	1.31	1.16	.....	0.09	*1.14	.....	1.39	10.13	63
64	General Crop Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	.....	.....	9.00	.....	.....	.....	.....	.....	3.00	.....	.....	12.84	.....
			.....	.....	9.09	9.82	9.82	1.40	.....	.....	3.74	.....	3.89	13.71	64
65	Michigan Carbon's Homestead Grain and Root Fertilizer The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00	.....	8.00	.....	.....	1.50	.....	.....	4.00	.....	.....	16.47	.....
			1.20	3.91	8.83	9.54	9.54	1.46	.....	0.39	4.24	.....	4.41	18.25	65

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia				Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Available.	Insoluble.	Value.	Total Percent.	Percent.	Value.		
66	Michigan Carbon's Red Line Phosphate with Potash The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... 10.60	10.00 11.45	..... 1.50	..... 1.98	..... 1.50	..... 11.50	11.50 12.58	2.00 2.26	..... 2.35	12.88 13.80	66
67	Michigan Carbon's Homestead General Crop Fertilizer The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.12	..... 8.77	..... 1.50	..... 2.24	..... 0.60	9.50 10.36	2.00 2.12	..... 2.20	14.39 15.48	67
68	Michigan Carbon's Red Line Phosphate The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... 14.14	14.00 15.27	..... 1.50	..... 2.17	..... 1.50	..... 15.50	15.50 16.31	..... .....	..... .....	15.12 15.27	68
69	Michigan Carbon's Homestead Vegetable Manure The American Agri. Chem. Co., Cleveland, O...	Claimed Found.	1.00 1.00	..... 3.26	8.00 7.68	..... 8.29	..... 1.50	..... 1.53	..... 0.41	9.50 9.21	7.00 7.38	..... 7.68	19.59 19.64	69
70	Michigan Carbon's Homestead Potato and Tobacco Fertilizer The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	2.00 2.05	..... 6.68	8.00 7.16	..... 7.73	..... 1.50	..... 2.05	..... 0.55	9.50 9.21	5.00 4.79	..... 4.98	20.77 19.94	70
71	Michigan Carbon's Special Potash Fertilizer The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... 9.34	10.00 10.09	..... 1.50	..... 2.46	..... 1.50	..... 11.50	11.50 11.80	5.00 4.47	..... 4.65	16.00 14.74	71
72	Michigan Carbon's Homestead Potash Fertilizer. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.05	..... 3.42	5.00 4.80	..... 5.18	..... 1.50	..... 1.08	..... 0.29	6.50 6.88	10.00 12.39	..... 12.89	19.47 21.78	72
73	Cleveland Dryer's Phospho Brand. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.23	..... 4.01	8.00 7.98	..... 8.62	..... 1.50	..... 1.92	..... 0.52	9.50 9.90	2.00 2.55	..... 2.65	14.39 15.80	73

74	Cleveland Dryer's Ohio Seed Maker with Potash. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	2.00 2.20	..... 7.17	8.00 8.56	..... 9.24	1.50 1.34	..... 0.36	9.50 9.90	2.00 2.52	..... 2.62	17.65 19.39	..... 74
75	Cleveland Dryer's Grain and Grass Grower. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.25	..... 4.08	9.00 8.79	..... 9.49	1.50 2.17	..... 0.59	10.50 10.96	1.00 1.49	..... 1.55	14.43 15.71	..... 75
76	Cleveland Dryer's XXX Phosphate. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... 14.00	14.00 14.77	..... 15.95	1.50 1.92	..... .....	15.50 16.69	..... .....	..... .....	15.12 15.95	..... 76
77	Cleveland Dryer's Forest City Buckeye Am- moniated Superphosphate The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	3.00 3.10	..... 10.11	9.00 9.21	..... 9.95	1.50 1.66	..... 0.45	10.50 10.87	2.00 2.47	..... 2.57	21.99 23.08	..... 77
78	North Western's Horseshoe Potash Manure. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... .....	10.00 9.27	..... 10.01	1.50 2.56	..... .....	11.50 11.83	5.00 5.05	..... 5.25	16.00 15.26	..... 78
79	North Western's Horseshoe Corn and Wheat Grower The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	2.00 2.25	..... 7.34	8.00 8.00	..... 8.64	1.50 1.59	..... 0.43	9.50 9.59	2.00 2.57	..... 2.67	17.65 19.08	..... 79
80	North Western's Horseshoe Acidulated Phosphate and Potash The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.24	..... 8.90	1.50 1.79	..... 0.48	9.50 10.03	2.00 2.47	..... 2.57	14.39 15.86	..... 80
81	North Western's Horseshoe Root and Cereal. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 0.98	..... 3.19	8.00 8.06	..... 8.70	1.50 1.66	..... .....	9.50 9.72	4.00 3.93	..... 4.09	16.47 15.98	..... 81
82	North Western's Horseshoe Dissolved Phosphate and Potash The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... .....	10.00 9.27	..... 10.01	1.50 2.87	..... .....	11.50 12.14	2.00 2.10	..... 2.18	12.88 12.19	..... 82
83	North Western's Horseshoe Quick Acting Phos- phate The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	..... .....	..... .....	12.00 12.25	..... 13.23	1.50 1.98	..... .....	13.50 14.23	..... .....	..... .....	12.96 13.23	..... 83
84	Bradley's Niagara Phosphate. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.25	..... 4.08	9.00 9.14	..... 9.87	1.50 2.30	..... 0.62	10.50 11.44	1.00 1.17	..... 1.22	14.43 15.79	..... 84

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.	
85	Bradley's Soluble Dissolved Phosphate. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	.....	.....	14.00	.....	1.50	15.50	.....	.....	15.12
			.....	.....	14.08	15.21	2.17	16.25	.....	.....	15.21
86	Bradley's Alkaline Phosphate and Potash. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	.....	.....	10.00	.....	1.50	11.50	2.00	.....	12.88
			.....	.....	10.67	11.52	1.98	12.65	2.33	2.42	13.94
87	Bradley's Justice Brand Phosphate. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	.....	.....	12.00	.....	1.50	13.50	.....	.....	12.96
			.....	.....	12.44	13.44	3.26	15.70	.....	.....	13.44
88	Bradley's Corn and Wheat Phosphate. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00	.....	8.00	.....	1.50	9.50	2.00	.....	14.39
			1.15	3.75	8.38	9.05	2.11	10.49	2.33	2.42	15.79
89	Bradley's Potato and Root Phosphate. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00	.....	8.00	.....	1.50	9.50	4.00	.....	16.47
			1.15	3.75	8.51	9.19	1.72	10.23	4.30	4.47	17.87
90	Williams & Clark's Americus Good Grower Potato Phosphate The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00	.....	8.00	.....	1.50	9.50	4.00	.....	16.47
			1.10	3.59	8.44	9.12	1.53	9.97	4.04	4.20	16.91
91	Williams & Clark's Americus Corn and Wheat Special The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00	.....	8.00	.....	1.50	9.50	2.00	.....	14.39
			1.25	4.08	8.41	9.08	1.56	9.97	2.49	2.59	16.17
92	Williams & Clark's Americus Acorn Brand Acid Phosphate The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	.....	.....	14.00	.....	1.50	15.50	.....	.....	15.12
			.....	.....	14.02	15.14	2.74	16.76	.....	.....	15.14



TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.	
			Value.		Available.		Insoluble.		Percent.	Value.			
					Percent.	Value.	Percent.	Value.					
106	Big Nine Morris & Company, Chicago, Ill.	Claimed. Found.	2.00 2.30	..... 7.50	8.00 7.61	..... 8.22	..... 2.00	..... 1.52	10.00 10.42	5.00 *5.43	..... 6.62	21.80 23.86	106
107	Big Ten Grain Grower. Morris & Company, Chicago, Ill.	Claimed. Found.	2.00 2.60	..... 8.48	8.00 7.74	..... 8.36	..... 2.00	..... 1.72	10.00 9.46	2.00 *2.53	..... 3.09	18.14 20.86	107
108	C. O. D. Phosphate. The Jarecki Chemical Co., Sandusky and Cincinnati, O.	Claimed. Found.	..... .....	..... .....	12.00 12.10	..... 13.07	..... 4.02	..... .....	13.00 16.12	..... .....	..... .....	12.96 13.07	..... 108
109	Dissolved Phosphate and Potash. The Cincinnati Phosphate Co., Cincinnati, O.	Claimed. Found.	..... .....	..... .....	10.00 10.93	..... 11.80	..... 1.72	..... .....	..... 12.65	4.00 4.30	..... 4.47	15.23 16.27	..... 109
110	Truck and Tobacco Fertilizer. The Cincinnati Phosphate Co., Cincinnati, O.	Claimed. Found.	2.00 1.95	..... 6.36	6.00 8.77	..... 9.47	..... 1.00	..... 1.46	..... 10.23	6.00 *5.66	..... 6.91	20.59 23.19	..... 110
111	"Bonus," A Humus Phosphate. The Cincinnati Phosphate Co., Cincinnati, O.	Claimed. Found.	0.50 0.85	..... 2.77	12.00 11.26	..... 12.16	..... 1.00	..... 3.13	..... 14.39	..... .....	..... .....	14.59 14.93	..... 111
112	Phosphate With Humus. The Packers' Fertilizer Co., Cincinnati, O.	Claimed. Found.	0.50 0.78	..... 2.54	12.00 10.93	..... 11.80	..... 1.00	..... 3.46	..... 14.39	..... .....	..... .....	14.59 14.34	..... 112
113	Raw Bone and Phosphate. The Wulchet Fertilizer Co., Dayton, O.	Claimed. Found.	2.00 2.10	..... 6.85	8.00 10.01	..... 10.81	..... 5.02	..... 1.36	..... 15.03	1.50 1.56	..... 1.62	19.96 20.64	..... 113
114	Spot Cash Fertilizer. The Wulchet Fertilizer Co., Dayton, O.	Claimed. Found.	2.00 1.75	..... 5.71	9.00 8.62	..... 9.31	..... 1.00	..... 3.52	..... 12.14	2.00 2.16	..... 2.25	18.32 18.22	..... 114



115	Ohio Farmers' Wheat Maker and Seeding Down. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 1.15	..... 3.75	8.00 7.29	..... 7.87	1.00 1.34	..... 0.36	..... 8.63	2.00 2.37	..... 2.46	14.25 14.44	..... 115
116	Ohio Farmers' Cilmax Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... 9.66	10.00 9.66	..... 10.43	1.00 1.59	..... .....	..... 11.25	5.00 4.99	..... 5.19	16.00 15.62	..... 116
117	Ohio Farmers' Soluble Phosphate and Potash. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... 9.60	10.00 9.60	..... 10.37	1.00 1.53	..... .....	..... 11.13	2.00 2.41	..... 2.51	12.88 12.88	..... 117
118	Groves' Corn and Tobacco Grower. The Groves Co., Cincinnati, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 7.74	..... 8.36	2.00 2.23	..... .....	10.00 9.97	4.00 4.59	..... 4.77	16.06 17.04	..... 118
119	Soluble Fertilizer E. Raub & Sons Fert. Co., Indianapolis, Ind..	Claimed. Found.	1.00 1.05	..... 3.42	9.00 10.98	..... 11.86	..... 2.74	..... .....	..... 13.72	1.00 1.47	..... 1.53	14.02 16.81	..... 119
120	Our Special E. Raub & Sons Fert. Co., Indianapolis, Ind..	Claimed. Found.	2.00 2.40	..... 7.82	10.00 9.72	..... 10.50	..... 2.17	..... 0.59	..... 11.89	6.00 5.70	..... 5.93	23.56 24.84	..... 120
121	Complete Fertilizer E. Raub & Sons Fert. Co., Indianapolis, Ind..	Claimed. Found.	1.00 1.05	..... 3.42	8.00 7.77	..... 8.39	..... 3.10	..... 0.84	..... 10.87	3.00 3.20	..... 3.33	15.02 15.98	..... 121
122	Bash's Ideal Grain Grower. Bash Fertilizer Co., Ft. Wayne, Ind.....	Claimed. Found.	2.00 1.45	..... 4.73	8.00 8.31	..... 8.97	1.00 0.83	..... 0.22	9.00 9.14	2.00 1.95	..... 2.03	17.51 15.96	..... 122
123	Swift's Onion, Potato and Tobacco Fertilizer. Swift & Company, Chicago, Ill.....	Claimed. Found.	2.00 1.98	..... 6.45	8.00 7.04	..... 7.60	2.00 3.90	..... 2.11	10.00 10.94	7.00 7.09	..... 8.65	24.78 24.81	..... 123
124	Swift's Pure Bone Meal and Potash. Swift & Company, Chicago, Ill.....	Claimed. Found.	3.00 3.30	..... 10.76	..... 9.98	..... 10.78	..... 13.05	..... 7.05	23.50 23.03	3.00 1.37	..... 1.42	28.65 30.01	..... 124
125	Ohio Vegetable Manure. The American Agri. Chem. Co., Cleveland, O...	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.76	..... 9.46	1.50 1.60	..... 0.43	9.50 10.36	7.00 7.80	..... 8.11	19.59 21.91	..... 125
126	A Ground Bone. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.50 1.50	4.89	12.35	13.34	17.65	9.53	25.00	.....	.....	21.64	..... 126
127	Michigan Carbon's Wolverine Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	12.00 12.67	13.68	1.50 3.13	..... .....	13.50 15.80	..... .....	..... .....	12.96 13.68	..... 127

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble Percent.	Value.	Percent.	Total value.	
128	Ground Bone The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	3.00 1.75	5.71	7.62	8.23	9.14	20.00 2.47	.....	23.18 16.41	..... 128
129	Crocker's Universal Grain Grower..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.35	..... 4.40	8.00 9.20	..... 9.94	1.50 1.99	9.50 11.19	2.00 2.49	14.39 17.47	..... 129
130	Pacific's A No. One Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.30	..... 4.24	8.00 8.94	..... 9.66	1.50 1.21	9.50 10.15	2.00 2.60	14.39 16.93	..... 130
131	North Western's Horseshoe Challenge Vegetable Grower..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.18	..... 8.83	1.50 1.40	9.50 9.58	7.00 6.82	19.59 20.21	..... 131
132	Michigan Carbon's Dessicated Bone..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.50 1.70	5.54	12.09	13.06	16.25	25.00 28.34	.....	21.64 27.38	..... 132
133	Michigan Carbon's Homestead Fertilizer..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.55	8.31	8.00 8.40	9.07	1.50 1.63	9.50 10.03	1.50 1.85	18.76 20.18	..... 133
134	Cleveland Dryer's Potato, Tobacco and General Crop Fertilizer..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.63	..... 9.32	1.50 1.40	9.50 10.03	4.00 4.47	16.47 18.26	..... 134
135	Cleveland Dryer's Horseshoe Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	12.00 10.30	11.12	1.50 5.56	13.50 15.86	.....	12.96 11.12	..... 135

136	Cleveland Dryer's Horsehead Phosphate and Potash The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	10.00 10.60	..... 11.45	1.50 2.05	..... .....	11.50 12.65	2.00 2.26	..... 2.35	12.88 13.80	..... 136	
137	Bradley's Dissolved Phosphate with Potash. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.15	9.00 3.75	..... 8.76	1.50 1.66	..... 9.46	10.50 10.42	2.00 4.36	..... 4.53	15.47 18.19	..... 137	
138	Bradley's Complete Manure for Potatoes and Vegetables The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	4.00 4.25	..... 13.86	8.00 8.64	..... 9.33	1.50 1.08	..... 0.29	9.50 9.72	7.00 6.36	..... 6.61	29.37 30.09	..... 138
139	Great Eastern's Corn Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.67	..... 9.36	1.50 1.59	..... 0.43	9.50 10.26	4.00 4.28	..... 4.45	16.47 18.15	..... 139
140	Great Eastern's Soluble Acid Phosphate and Potash The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.51	..... 10.27	1.50 3.07	..... .....	11.50 12.58	2.00 2.01	..... 2.09	12.88 12.36	..... 140
141	Zell's Electric Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 11.00	..... 11.88	1.50 2.36	..... .....	11.50 13.36	2.00 2.24	..... 2.33	12.88 14.21	..... 141
142	Zell's Economizer The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.15	..... 3.75	8.00 9.02	..... 9.74	1.50 1.21	..... 0.33	9.50 10.23	2.00 2.42	..... 2.52	14.39 16.34	..... 142
143	Old Reliable Corn and Wheat Special. The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	2.00 1.65	..... 5.38	10.00 10.24	..... 11.06	2.00 1.59	..... 0.86	12.00 11.83	3.00 3.89	..... 4.05	21.52 21.35	..... 143
145	Potato Phosphate L. Frank & Sons, Zanesville, O.....	Claimed. Found.	2.00 2.03	..... 6.62	9.00 11.06	..... 11.94	1.00 3.71	..... 1.00	10.00 14.77	6.00 *7.57	..... 9.24	23.56 28.80	..... 145
146	Groves' Complete Grain Grower. The Groves Co., Cincinnati, O.....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 7.16	..... 7.73	2.00 2.36	..... .....	10.00 9.52	2.00 2.22	..... 2.31	13.98 13.63	..... 146
147	Groves' Potash Mixture. The Groves Co., Cincinnati, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.87	..... 10.66	2.00 2.30	..... .....	12.00 12.17	5.00 5.63	..... 5.86	16.00 16.52	..... 147
148	Groves' Monarch Brand. The Groves Co., Cincinnati, O.....	Claimed. Found.	..... .....	..... .....	14.00 15.16	..... 16.37	2.00 1.98	..... .....	16.00 17.14	..... .....	..... .....	15.12 16.37	..... 148

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Available.		Insoluble		Percent.	Value.		
					Percent.	Value.	Percent.	Value.				
149	Groves' 10% Potash Fertilizer..... The Groves Co., Cincinnati, O.....	Claimed. Found.	1.00 1.05	..... 3.42	5.00 4.68	..... 5.05	2.00 1.59	..... 0.43	7.00 6.27	10.00 10.06	..... 19.06 19.36	149
150	Crocker's Harvest Jewel..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.00 2.05	..... 6.68	8.00 7.83	..... 8.46	1.50 1.76	..... 0.48	9.50 9.59	2.00 2.24	..... 17.65 17.95	150
151	Great Eastern's Unammoniated Wheat Special. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	12.00 12.54	..... 13.54	1.50 3.26	..... .....	13.50 15.80	..... .....	..... 12.96 13.54	151
152	Crocker's Dissolved Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	14.00 14.52	..... 15.68	1.50 1.85	..... .....	15.50 16.37	..... .....	..... 15.12 15.68	152
153	Great Eastern's Vegetable, Vine and Tobacco... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.90	..... 9.45	8.00 8.30	..... 8.96	1.50 1.79	..... 0.48	9.50 10.09	3.00 3.26	..... 20.32 22.28	153
154	High Grade Acid Phosphate and Potash..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 11.33	..... 12.24	1.50 2.23	..... .....	11.50 13.56	5.00 5.28	..... 16.00 17.73	154
155	A. A. Co.'s High Grade Vegetable and Tobacco. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.71	..... 9.41	1.50 1.59	..... 0.43	9.50 10.30	7.00 8.03	..... 19.59 22.10	155
156	Cleveland Dryer's XXX Phosphate and Potash... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	12.00 10.81	..... 11.67	1.50 3.19	..... .....	13.50 14.00	4.00 4.28	..... 17.12 16.12	156
157	Calumet Brand Sure Growth Fertilizer..... Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.00 0.90	..... 2.93	8.00 8.00	..... 8.64	1.00 1.57	..... 0.31	9.00 8.57	2.00 2.85	..... 14.52 14.84	157

No.	Fertilizer	Claimed. Found.	.....	10.00 10.74	.....	1.00 1.60	.....	11.00 11.57	.....	5.00 5.04	.....	16.54 17.29	.....
158	Calumet Brand High Grade Bone Phosphate and Potash Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	.....	10.00 10.74	.....	1.00 1.60	.....	11.00 11.57	.....	5.00 5.04	.....	16.54 17.29	.....
159	Oats and Corn..... The M. Hamm Co., Washington C. H., O.....	Claimed. Found.	.....	10.00 11.17	.....	1.00 12.06	.....	11.00 21.69	.....	2.00 2.04	.....	13.24 14.55	.....
160	General Crop..... The M. Hamm Co., Washington C. H., O.....	Claimed. Found.	1.00 1.05	8.00 9.40	.....	1.00 4.73	.....	9.00 14.13	.....	2.00 2.30	.....	14.34 17.66	.....
161	Dissolved Phosphate..... The M. Hamm Co., Washington C. H., O.....	Claimed. Found.	.....	16.00 18.30	.....	1.00 1.46	.....	17.00 19.76	.....	.....	.....	17.28 19.76	.....
162	Corn and Tobacco..... The M. Hamm Co., Washington C. H., O.....	Claimed. Found.	.....	14.00 15.17	.....	1.00 3.96	.....	15.00 19.13	.....	4.00 3.65	.....	20.00 20.83	.....
163	Economy..... The M. Hamm Co., Washington C. H., O.....	Claimed. Found.	.....	12.00 12.28	.....	1.00 5.50	.....	13.00 17.78	.....	.....	.....	12.96 13.26	.....
164	Swift's Champion Wheat and Corn Grower..... Swift & Company, Chicago, Ill.....	Claimed. Found.	2.00 1.85	12.00 11.89	.....	2.00 12.84	.....	14.00 14.00	.....	2.00 2.64	.....	22.64 22.76	.....
165	Swift's Ground Steamed Bone..... Swift & Company, Chicago, Ill.....	Claimed. Found.	2.00 2.35	.....	7.66 10.43	.....	11.26 11.89	.....	20.00 22.32	.....	.....	19.92 25.34	.....
166	Swift's Grain Fertilizer..... Swift & Company, Chicago, Ill.....	Claimed. Found.	1.25 1.20	8.00 3.91	.....	1.00 8.01	.....	9.00 10.67	.....	2.00 2.03	.....	15.34 15.84	.....
167	Swift's Garden City Phosphate..... Swift & Company, Chicago, Ill.....	Claimed. Found.	.....	14.00 14.36	.....	1.00 1.23	.....	15.00 15.64	.....	.....	.....	15.12 15.51	.....
168	Big Bonanza Tobacco and Potato Grower..... The Queen City Fert. Co., Cincinnati, O.....	Claimed. Found.	1.00 1.15	8.00 3.75	.....	1.00 9.73	.....	.....	.....	4.00 3.64	.....	16.33 17.56	.....
169	Abbott & Martin's Potato and Tobacco Special... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	2.00 1.43	8.00 4.66	.....	1.00 9.53	.....	.....	.....	4.00 4.80	.....	19.59 18.97	.....

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.	
170	Abbott & Martin's Harvest King..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.50 1.10	..... 3.59	8.00 7.99	..... 8.63	1.00 1.40	..... 0.38	2.00 2.33	..... 2.42	15.88 15.02
171	Farmers' Union Standard Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.06	..... 3.42	9.00 9.12	..... 9.85	1.50 1.69	10.50 10.81	2.00 2.15	..... 2.24	15.47 15.97
172	Pacific's Nobisque General Crop..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.05	..... 3.42	9.00 8.63	..... 9.32	1.50 1.92	10.50 10.55	2.00 2.57	..... 2.67	15.47 15.93
174	Ohio and Michigan Special..... Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	1.00 1.23	..... 4.01	10.00 9.90	..... 10.69	..... 2.68	..... 12.58	1.00 *1.99	..... 2.43	15.28 17.13
175	Square Brand Phosphate and Potash..... The Jarecki Chemical Co., Sandusky and Cincinnati, O. ....	Claimed. Found.	..... .....	..... .....	10.00 10.35	..... 11.18	1.00 2.30	11.00 12.65	2.00 *2.22	..... 2.71	13.24 13.89
176	Read's Standard ..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.15	..... 3.75	8.00 8.12	..... 8.77	1.50 1.57	9.50 9.69	4.00 4.40	..... 4.58	16.47 17.52
177	Milcom's Wheat, Oats and Barley..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.25	..... 4.08	8.00 8.76	..... 9.45	1.50 1.92	9.50 10.67	2.00 2.31	..... 2.40	14.39 16.93
178	Chicago Fertilizer Co.'s Potash Special..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 0.80	..... 2.61	8.00 8.32	..... 8.99	1.00 1.46	..... 9.78	4.00 3.80	..... 3.95	16.33 15.55

180	Corn and Grain Grower. Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	.....	.....	10.00	.....	1.08	.....	11.00	5.00	.....	16.00	.....
			.....	.....	10.49	11.33	.....	.....	11.57	8.00	8.32	19.65	180
181	Ideal Wheat and Corn. Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	2.00	.....	9.00	.....	.....	.....	.....	5.00	.....	21.44	.....
			1.75	5.71	10.39	11.22	1.06	.....	11.44	5.14	5.35	22.28	181
182	Bell's Phosphate Geo. A. Bell, Wheelersburg, O.	Claimed. Found.	.....	.....	15.00	.....	1.50	.....	20.60	.....	.....	16.20	.....
			.....	.....	15.94	17.22	4.66	.....	.....	.....	.....	17.22	182
183	Crocker's Erie Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	.....	.....	12.00	.....	1.50	.....	13.50	.....	.....	12.96	.....
			.....	.....	12.41	13.40	1.92	.....	14.33	.....	.....	13.40	183
184	Corn and Wheat Grower. Dahl & Miller, Washington C. H., O.	Claimed. Found.	1.00	.....	9.00	.....	1.00	.....	1.21	13.36	2.00	15.33	.....
			1.15	3.75	8.89	9.60	4.47	1.21	13.36	3.74	3.89	18.45	184
185	Dahl's Special Dahl & Miller, Washington C. H., O.	Claimed. Found.	3.00	.....	10.00	.....	3.00	.....	1.88	17.97	2.00	23.83	.....
			2.68	8.74	11.73	12.67	6.24	1.88	17.97	2.55	3.11	26.20	185
187	Phosphate and Potash. The Queen City Fertilizer Co., Cincinnati, O.	Claimed. Found.	.....	.....	10.00	.....	1.00	.....	.....	2.00	.....	12.88	.....
			.....	.....	11.01	11.89	2.74	.....	13.75	2.35	2.44	14.33	187
188	Lion Truck Grower. The Queen City Fertilizer Co., Cincinnati, O.	Claimed. Found.	2.00	.....	6.00	.....	1.00	.....	.....	6.00	.....	20.59	.....
			2.15	7.01	7.23	7.81	1.21	0.38	8.44	5.10	6.22	21.37	188
189	Truck Grower The M. Hamm Co., Washington C. H., O.	Claimed. Found.	1.00	.....	8.00	.....	1.00	.....	.....	8.00	.....	20.22	.....
			2.15	7.01	8.00	8.64	3.64	0.98	11.64	8.54	8.88	25.51	189
190	Hamm's Special The M. Hamm Co., Washington C. H., O.	Claimed. Found.	2.00	.....	10.00	.....	3.00	.....	13.00	3.00	.....	21.79	.....
			2.25	7.34	12.15	13.12	5.38	1.45	17.53	2.95	3.60	25.51	190
191	Acidulated Special The M. Hamm Co., Washington C. H., O.	Claimed. Found.	1.00	.....	10.00	.....	1.00	.....	11.00	2.00	.....	16.50	.....
			1.25	4.08	11.84	12.79	9.33	2.52	21.17	1.76	2.15	21.54	191
192	Abbott & Martin's Dissolved Phosphate and Potash The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	.....	.....	10.00	.....	1.00	.....	.....	5.00	.....	16.00	.....
			.....	.....	10.61	11.46	1.66	.....	12.27	4.76	4.95	16.41	192

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.		
193	Abbott & Martin's York Special. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 0.98	..... 3.19	8.00 8.50	..... 9.18	1.00 1.34	..... 9.84	7.00 7.02	..... 7.30	19.45 20.03	193
194	Abbott & Martin's Peerless Phosphate and Potash The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 0.95	..... 3.10	8.00 8.00	..... 8.64	1.00 1.59	..... 9.59	2.00 2.20	..... 2.29	14.25 14.46	194
195	16% Acid Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	16.00 15.99	..... 17.27	1.00 0.96	..... 16.95	..... .....	..... .....	17.28 17.27	195
196	Buckeye Wheat Maker. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.96	..... 10.76	1.00 2.11	..... 12.07	2.00 2.57	..... 2.67	12.88 13.43	196
197	Williams & Clark's Americus Dissolved Phosphate and Potash. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 11.57	..... 12.50	1.50 2.56	11.50 14.13	2.00 2.26	..... 2.35	12.88 14.85	197
198	Wheeler's Royal Wheat Grower. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.30	..... 4.24	8.00 8.82	..... 9.53	1.50 1.41	..... 9.50	2.00 2.44	..... 2.54	14.39 16.69	198
199	Wheeler's Corn Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.00 2.35	..... 7.66	8.00 9.01	..... 9.73	1.50 1.66	9.50 10.67	2.00 2.35	..... 2.44	17.65 20.23	199
200	Wheeler's Wheat and Clover Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 11.07	..... 11.96	1.50 2.62	11.50 13.69	2.00 2.08	..... 2.16	12.88 14.12	200



201	Wheeler's Potato Manure..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.80	..... 9.13	8.00 8.32	..... 9.63	1.50 1.79	..... 0.48	9.50 10.61	8.00 8.43	..... 3.57	20.32 22.71	..... 201
202	Quinnipiac's Plain Superphosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... 12.00	12.00 12.42	..... 13.41	1.50 3.19	..... .....	13.50 15.61	..... .....	..... .....	12.96 13.41	..... 202
203	Quinnipiac's Mohawk Fertilizer..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.40	..... 4.56	9.00 9.72	..... 10.50	1.50 2.23	..... 0.60	10.50 11.95	1.00 1.40	..... 1.46	14.43 17.12	..... 203
204	Quinnipiac's Climax Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.50	..... 4.89	9.00 8.70	..... 9.40	1.50 2.81	..... 0.76	10.50 11.51	2.00 2.76	..... 2.87	15.47 17.92	..... 204
205	Quinnipiac's Special Potato..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.25	..... 4.08	8.00 8.89	..... 9.60	1.50 1.66	..... 0.45	9.50 10.55	4.00 4.49	..... 4.67	16.47 18.80	..... 205
206	Bull Dog Phosphate..... Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	..... .....	..... 12.00	12.00 12.47	..... 13.47	1.50 2.11	..... .....	13.50 14.58	..... .....	..... .....	12.96 13.47	..... 206
207	Dissolved Phosphate and Potash..... Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	..... .....	..... 10.00	10.00 9.15	..... 9.88	1.50 2.49	..... .....	11.50 11.64	5.00 4.95	..... 5.15	16.00 16.03	..... 207
208	Grain and Grass Grower..... Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	..... .....	..... 10.00	10.00 9.66	..... 10.43	1.50 2.23	..... .....	11.50 11.89	2.00 2.20	..... 2.29	12.88 12.72	..... 208
209	Corn and Wheat Grower..... Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 7.86	..... 8.49	1.50 1.79	..... 0.48	9.50 9.65	2.00 2.33	..... 2.42	14.39 14.98	..... 209
210	Tiger Bone Meal..... Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	1.50 1.73	..... 5.64	..... 11.91	..... 12.86	..... 15.47	..... .....	25.00 27.38	..... .....	..... .....	21.64 26.85	..... 210
211	Great Eastern's Dissolved Acid Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... 14.00	14.00 14.27	..... 15.41	1.50 1.85	..... .....	15.50 16.12	..... .....	..... .....	15.12 15.41	..... 211
212	Farmers' Union Club and Grange Formula..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.05	..... 3.42	8.00 8.00	..... 8.64	1.50 1.53	..... 0.41	9.50 9.53	2.00 2.37	..... 2.46	14.39 14.93	..... 212
213	Farmers' Union Dissolved Phosphate..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... 14.00	14.00 14.33	..... 15.48	1.50 1.72	..... .....	15.50 16.05	..... .....	..... .....	15.12 15.48	..... 213

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Available.	Insoluble.	Total Percent.	Total Value.	Percent.	Value.	
214	Milsom's Acid Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	14.00	1.50	15.50	.....	.....	15.12	.....
215	Milsom's 12% Acid Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	13.30	1.92	15.22	.....	.....	14.36	214
216	Buckeye Champion Grain Grower. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.50	.....	12.00	1.50	13.50	.....	.....	12.96	.....
218	Big Four Morris & Company, Chicago, Ill.....	Claimed. Found.	.....	.....	12.16	2.17	14.33	.....	.....	13.13	215
220	Swift's Potato, Celery and Onion Grower. Swift & Company, Chicago, Ill.....	Claimed. Found.	1.50	.....	8.00	1.00	.....	.....	2.00	15.38	.....
222	General Favorite Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	1.25	4.08	7.68	1.53	9.21	.....	2.45	14.92	216
223	Calumet Brand Special 10% Potash Manure. Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	5.00	.....	7.00	5.00	12.00	.....	4.00	31.44	.....
224	Crocker's Dissolved Phosphate and Potash. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	3.70	12.06	8.76	12.81	11.57	.....	4.51	28.54	218
225	North Western's Horseshoe Soluble Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00	.....	5.00	1.00	6.00	.....	10.00	21.40	.....
			1.05	3.42	5.25	12.11	7.36	.....	9.45	21.76	220
			1.50	.....	8.00	.....	.....	.....	2.50	16.13	.....
			0.25	0.82	12.03	2.30	14.33	.....	1.25	15.11	222
			1.00	.....	5.00	1.00	6.00	.....	10.00	19.60	.....
			1.10	3.59	6.82	10.51	6.33	.....	10.02	20.58	223
			.....	.....	.....	.....	.....	.....	.....	.....	.....
			.....	.....	10.00	1.50	11.50	.....	2.00	12.88	.....
			.....	.....	9.72	2.74	12.46	.....	2.09	12.67	224
			.....	.....	14.00	1.50	15.50	.....	.....	15.12	.....
			.....	.....	15.00	1.37	16.37	.....	.....	16.20	225

226	Raw Bone and Guano Mixture. The Jarecki Chemical Co., Sandusky and Cincinnati, O. ....	2.00 2.25	..... 7.34	10.00 11.98	..... 12.94	6.00 18.75	..... 4.73	16.00 20.73	1.00 1.47	..... 1.53	21.60 26.54	..... 226
227	Tobacco, Potato and Beet Grower. The Cincinnati Phosphate Co., Cincinnati, O. ....	1.00 1.00	..... 3.26	8.00 8.08	..... 9.81	1.00 1.92	..... .....	..... 11.00	4.00 3.43	..... 3.57	16.33 18.64	..... 227
228	Eagle Potash Mixture. Louisville Fertilizer Co., Louisville, Ky. ....	..... .....	..... .....	10.00 10.75	..... 11.61	..... 3.19	..... .....	..... 13.94	2.00 2.28	..... 2.37	12.88 13.98	..... 228
229	Swift's Special Phosphate and Potash. Swift & Company, Chicago, Ill. ....	..... .....	..... .....	10.00 10.67	..... 11.52	1.00 1.40	..... .....	11.00 12.07	2.00 1.79	..... 1.86	12.88 13.38	..... 229
230	Swift's High Grade Phosphate and Potash. Swift & Company, Chicago, Ill. ....	..... .....	..... .....	10.00 9.71	..... 10.49	1.00 0.96	..... .....	11.00 10.67	4.00 3.82	..... 2.93	14.96 13.42	..... 230
231	Swift's Vegetable Grower. Swift & Company, Chicago, Ill. ....	4.00 4.00	..... 13.04	9.00 9.66	..... 10.43	2.00 1.72	..... 0.93	11.00 11.38	10.00 *7.98	..... 7.94	36.04 34.14	..... 231
232	Peerless Fertilizer E. Rauh & Sons Fert. Co., Indianapolis, Ind. ....	1.00 1.28	..... 4.17	8.00 8.41	..... 9.08	..... 2.23	..... .....	..... 10.64	6.00 7.07	..... 7.35	18.14 20.60	..... 232
233	Grain Grower E. Rauh & Sons Fert. Co., Indianapolis, Ind. ....	..... .....	..... .....	10.00 10.65	..... 11.50	2.27 .....	..... .....	..... 12.92	4.00 4.49	..... 4.67	14.96 16.17	..... 233
234	Red Star Phosphate. E. Rauh & Sons Fert. Co., Indianapolis, Ind. ....	..... .....	..... .....	14.00 13.95	..... 15.07	2.94 .....	..... .....	..... 16.89	..... .....	..... .....	15.12 15.07	..... 234
235	Calumet Brand Special Potato, Tobacco and Onion Grower Hirsh, Stein & Co., Chicago, Ill. ....	2.00 2.10	..... 6.86	8.00 8.11	..... 8.76	1.00 0.90	..... 0.49	9.00 9.01	10.00 *9.04	..... 11.03	27.90 27.13	..... 235
236	Calumet Brand Grain Grower. Hirsh, Stein & Co., Chicago, Ill. ....	2.00 2.00	..... 6.52	8.00 6.88	..... 7.43	1.00 1.02	..... 0.55	9.00 7.90	2.00 3.91	..... 4.07	17.78 18.57	..... 236
237	Grain and Grass Grower. The Cincinnati Phosphate Co., Cincinnati, O. ....	1.00 1.65	..... 5.38	8.00 8.89	..... 9.60	1.00 2.62	..... 0.71	..... 11.61	2.00 2.26	..... 2.35	14.25 18.04	..... 237

† From animal matter.

\* From sulphate.

\*. From sulphate.

**† From animal matter.**

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble Percent.	Value.	Percent.	Value.		
214	Milsom's Acid Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	14.00 13.30	..... 14.36	1.50 1.92	..... .....	.....	.....	15.12 14.36	214
215	Milsom's 12% Acid Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	12.00 12.16	13.13	1.50 2.17	..... .....	.....	.....	12.96 13.13	215
216	Buckeye Champion Grain Grower. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.50 1.25	..... 4.08	8.00 7.68	..... 8.29	1.00 1.53	.....	2.00 2.45	2.55	15.88 14.92	216
218	Big Four Morris & Company, Chicago, Ill.....	Claimed. Found.	5.00 3.70	..... 12.06	7.00 8.76	..... 9.46	5.00 12.81	..... 1.52	4.00 11.57	..... 4.51	31.44 28.54	218
220	Swift's Potato, Celery and Onion Grower. Swift & Company, Chicago, Ill.....	Claimed. Found.	1.00 1.06	..... 3.42	5.00 5.25	..... 5.67	1.00 12.11	..... 1.14	10.00 7.36	..... 9.45	21.40 21.76	220
222	General Favorite Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	1.50 0.26	..... 0.82	8.00 12.03	..... 12.99	..... 2.30	.....	2.50 1.25	.....	16.13 15.11	222
223	Calumet Brand Special 10% Potash Manure. Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.00 1.10	..... 3.59	5.00 5.82	..... 6.29	1.00 10.51	..... 0.28	10.00 6.33	..... 10.02	19.60 20.58	223
224	Crocker's Dissolved Phosphate and Potash. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	10.00 9.72	..... 10.50	1.50 2.74	.....	2.00 2.09	..... 2.17	12.88 12.67	224
225	North Western's Horseshoe Soluble Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	14.00 15.00	..... 16.20	1.50 1.37	.....	.....	.....	15.12 16.20	225

226	Raw Bone and Guano Mixture. The Jarecki Chemical Co., Sandusky and Cincinnati, O. ....	2.00 2.25	..... 7.34	10.00 11.98	..... 12.94	6.00 78.75	..... 4.73	16.00 20.73	1.00 1.47	..... 1.53	21.60 26.54
227	Tobacco, Potato and Beet Grower. The Cincinnati Phosphate Co., Cincinnati, O. ....	1.00 1.00	..... 3.26	8.00 9.08	..... 9.81	1.00 1.92	..... .....	..... 11.00	4.00 3.43	..... 3.57	16.33 16.64
228	Eagle Potash Mixture. Louisville Fertilizer Co., Louisville, Ky. ....	..... .....	..... .....	10.00 10.75	..... 11.61	..... 3.19	..... .....	..... 13.94	2.00 2.28	..... 2.37	12.88 13.98
229	Swift's Special Phosphate and Potash. Swift & Company, Chicago, Ill. ....	..... .....	..... .....	10.00 10.67	..... 11.52	1.00 1.40	..... .....	11.00 12.07	2.00 1.79	..... 1.86	12.88 13.38
230	Swift's High Grade Phosphate and Potash. Swift & Company, Chicago, Ill. ....	..... .....	..... .....	10.00 9.71	..... 10.49	1.00 0.96	..... .....	11.00 10.67	4.00 2.82	..... 2.93	14.96 13.42
231	Swift's Vegetable Grower. Swift & Company, Chicago, Ill. ....	4.00 4.00	..... 13.04	9.00 9.66	..... 10.43	2.00 1.72	..... 0.93	11.00 11.38	10.00 7.98	..... 36.04	..... 34.14
232	Peerless Fertilizer E. Rauh & Sons Fert. Co., Indianapolis, Ind. ....	1.00 1.28	..... 4.17	8.00 8.41	..... 9.08	..... 2.23	..... .....	..... 10.64	6.00 7.07	..... 7.35	18.14 20.60
233	Grain Grower E. Rauh & Sons Fert. Co., Indianapolis, Ind. ....	..... .....	..... .....	10.00 10.65	..... 11.50	2.27 .....	..... .....	..... 12.92	4.00 4.49	..... 4.67	14.96 16.17
234	Red Star Phosphate. E. Rauh & Sons Fert. Co., Indianapolis, Ind. ....	..... .....	..... .....	14.00 13.95	..... 15.07	2.94 .....	..... .....	..... 16.89	..... .....	..... .....	15.12 15.07
235	Calumet Brand Special Potato, Tobacco and Onion Grower Hirsh, Steil & Co., Chicago, Ill. ....	2.00 2.10	..... 6.85	8.00 8.11	..... 8.76	1.00 0.90	..... 0.49	9.00 9.01	10.00 9.04	..... 11.03	27.90 27.13
236	Calumet Brand Grain Grower. Hirsh, Steil & Co., Chicago, Ill. ....	2.00 2.00	..... 6.52	8.00 6.88	..... 7.43	1.00 1.02	..... 0.55	9.00 7.90	2.00 3.91	..... 4.07	17.78 18.57
237	Grain and Grass Grower. The Cincinnati Phosphate Co., Cincinnati, O. ....	1.00 1.65	..... 5.38	8.00 8.89	..... 9.60	1.00 2.62	..... 0.71	11.51 .....	2.00 2.26	..... 2.35	14.25 18.04

† From animal matter.  
\* From sulphate.

From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia				Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Available.	Insoluble	Total Percent.	Percent.	Value.	Total value.	
238	Milson's Buffalo Complete Manure. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.15	..... 3.75	8.00 8.57	..... 9.26	1.50 2.23	..... 0.60	9.50 10.80	4.00 4.22	..... 4.39	16.47 18.00	238
239	North Western's Horse Shoe Garden City Superphosphate The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.80	..... 9.13	8.00 10.23	..... 11.05	1.50 2.17	..... 0.59	9.50 12.40	1.50 1.70	..... 1.77	18.76 22.54	239
240	Dissolved Phosphate The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	..... .....	..... .....	12.00 12.03	..... 12.99	..... 3.96	..... 15.99	..... .....	..... .....	..... .....	12.96 12.99	240
241	Sixteen Per Cent. Acid The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	..... .....	..... .....	16.00 17.14	..... 18.51	..... 0.26	..... 17.40	..... .....	..... .....	..... .....	17.28 18.51	241
242	Phosphate and Potash The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	..... .....	..... .....	10.00 8.57	..... 9.26	1.00 2.94	..... 11.51	11.00 11.51	2.00 2.58	..... 2.68	13.15 11.94	242
243	Corn and Oats Special The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	1.00 0.95	..... 3.10	8.00 6.26	..... 6.76	1.00 2.62	..... 0.71	9.00 8.88	2.00 2.57	..... 2.67	14.25 13.24	243
244	Wheat and Grass Grower The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	1.00 1.90	..... 6.19	10.00 8.60	..... 9.29	1.00 4.35	..... 1.17	11.00 12.95	1.00 3.28	..... 3.41	15.37 20.06	244
245	Potato and General Crop Grower The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	1.00 0.85	..... 2.77	8.00 8.60	..... 9.29	1.00 2.14	..... 0.58	9.00 10.74	4.00 4.97	..... 5.17	16.33 17.81	245

246	Truck Grower The G. E. Howell Provision Co., Newark, O.....	Claimed. Found.	3.00 3.15	10.27	6.00 4.66	..... 5.03	2.00 3.52	..... 1.90	8.00 8.18	10.00 11.10	..... 11.54	27.20 28.74	..... 246
248	Milsom's Dissolved Phosphate and Potash. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.69	..... 10.47	1.50 2.36	..... .....	11.50 12.05	2.00 1.87	..... 1.94	12.88 12.41	..... 248
249	Buckeye Phosphate The Wulchet Fertilizer Co., Dayton, O.....	Claimed. Found.	..... .....	..... .....	14.00 12.09	..... 13.06	1.00 3.90	..... .....	..... 16.99	..... .....	..... .....	15.12 13.06	..... 249
250	Buckeye Extra Superphosphate The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	14.00 15.06	..... 16.26	1.00 1.31	..... .....	..... 16.37	..... .....	..... .....	15.12 16.26	..... 250
251	Ohio Farmers' Alkaline Phosphate The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	14.00 15.10	..... 16.31	1.00 1.46	..... .....	..... 16.56	..... .....	..... .....	15.12 16.31	..... 251
252	Number Five Special Grain and Grass Grower. The Independent Packers Fertilizer Co., Columbus, O.....	Claimed. Found.	2.00 2.15	..... 7.01	8.00 8.50	..... 9.18	..... 1.66	..... .....	..... 0.45	..... 10.16	2.00 2.45	..... 2.55	..... 17.24 19.19 252
253	North Western's Horse Shoe Special Potash Manure The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.10	..... 3.59	5.00 5.18	..... 5.59	1.50 1.15	..... .....	..... 0.31	6.50 6.33	10.00 11.14	..... 11.59	..... 19.47 21.08 253
254	Eagle Corn and Wheat Grower. Louisville Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00 1.00	..... 3.26	8.00 8.51	..... 9.19	..... 4.54	..... .....	..... .....	..... 2.00	..... 2.71	..... 3.31	..... 14.34 15.76 254
255	"Natural Guano" (Pulverized Sheep Manure) Natural Guano Co., Aurora, Ill.....	Claimed. Found.	3.00 2.80	..... 9.13	1.50 1.47	..... 1.59	0.25 0.19	..... .....	..... 0.10	1.75 1.66	1.50 1.95	..... 2.03	..... 13.10 12.85 255
256	Bowker's 10% Manure The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	1.00 1.23	..... 4.01	5.00 5.47	..... 5.91	1.50 1.28	..... .....	..... 0.35	..... 6.75	10.00 11.10	..... 11.54	..... 19.47 21.81 256
257	Bowker's Potash Fertilizer. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	..... .....	..... .....	10.00 11.06	..... 11.94	1.50 2.30	..... .....	..... .....	..... 5.00	..... 5.34	..... 5.55	..... 16.00 17.49 257
258	Bowker's Sure Crop. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	1.00 1.30	..... 4.24	9.00 9.59	..... 10.36	1.50 2.11	..... .....	..... 0.57	..... 11.70	2.00 2.41	..... 2.51	..... 15.47 17.68 258

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia				Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Percent.	Value.	Available.	Insoluble.	Total Percent.	Percent.	Value.	Total value.		
259	Bowker's Acid Phosphate. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	.....	.....	12.00	.....	.....	1.50	.....	.....	.....	12.96	.....	259
			.....	.....	12.47	13.47	3.58	.....	16.05	.....	.....	13.47	.....	
260	Bowker's Wheat and Oats Special. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	.....	.....	10.00	.....	.....	1.50	.....	2.00	.....	12.88	.....	260
			.....	.....	10.87	11.74	2.49	.....	13.36	2.18	2.27	14.01	.....	
261	Bowker's Bone Meal. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	1.50	.....	.....	.....	.....	.....	25.00	.....	.....	21.64	.....	261
			1.70	5.54	10.11	10.92	15.03	8.12	25.14	.....	.....	24.58	.....	
262	Bowker's High Grade Fertilizer. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	3.00	.....	8.00	.....	.....	1.50	.....	6.00	.....	26.15	.....	262
			3.25	10.60	9.14	9.87	2.06	0.55	11.19	5.88	7.17	28.19	.....	
263	Bowker's Harvest Queen. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	1.00	.....	8.00	.....	.....	1.50	.....	2.00	.....	14.39	.....	263
			1.05	3.42	9.21	9.95	1.92	0.52	11.13	2.24	2.33	16.22	.....	
264	Bowker's Ideal Grain Grower. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	1.50	.....	8.00	.....	.....	1.50	.....	4.00	.....	18.10	.....	264
			1.55	5.05	9.14	9.87	1.28	0.35	10.42	4.25	4.42	19.69	.....	
265	Bowker's Tobacco Grower. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	2.00	.....	8.00	.....	.....	1.50	.....	5.00	.....	21.67	.....	265
			2.20	7.17	8.76	9.46	1.53	0.41	10.29	5.32	6.49	23.53	.....	
266	Humus Chief The New Process Fertilizer Co., Columbus, O..	Claimed. Found.	.....	.....	14.00	.....	.....	.....	.....	.....	.....	15.12	.....	266
			.....	.....	16.25	17.55	3.07	.....	19.32	.....	.....	17.55	.....	
267	O. K. Chief The New Process Fertilizer Co., Columbus, O..	Claimed. Found.	2.00	.....	7.00	.....	.....	.....	.....	2.00	.....	16.16	.....	267
			2.23	7.27	7.47	8.07	2.06	0.55	9.52	2.22	2.31	18.20	.....	



268	<b>Big Chief</b> The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	1.00 1.60	5.22 9.15	8.00 9.88	1.98	11.13	4.00 4.36	4.53 19.63	16.06 268
269	<b>Black Chief</b> The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	2.00 1.70	8.00 8.69	9.39	2.62	11.31	3.00 3.07	18.28 18.12	269
270	<b>Royal Chief</b> The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	2.00 1.96	9.00 8.44	9.12	1.79	10.23	5.00 4.66	21.44 20.33	270
271	<b>Acme Chief</b> The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	2.00 1.80	8.00 8.02	8.66	1.82	9.84	8.00 7.23	23.48 22.06	271
272	<b>Acme Special</b> The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	2.00 1.75	8.00 7.58	8.19	1.21	8.79	10.00 7.24	25.56 21.43	272
273	<b>Animal Tankage and Potash</b> The G. E. Howell Provision Co., Newark, O.	Claimed. Found.	2.00 1.25	8.00 6.52	7.04	2.11	0.57	2.00 2.99	17.78 14.80	273
274	<b>Pure Bone Meal</b> The Mendelson Reduction Co., Elyria, O.	Claimed. Found.	4.90 4.35	11.27 14.18	8.85	9.46 13.56	20.73 21.75	2.00 2.99	28.14 30.35	274
276	<b>Number Two General Crop</b> The Independent Packers' Fertilizer Co., Columbus, O.	Claimed. Found.	1.00 0.98	7.00 3.19	7.86	0.39	7.67	3.00 3.41	13.94 14.60	276
277	<b>Number Three, Corn, Wheat, Oats and Clover</b> The Independent Packers' Fertilizer Co., Columbus, O.	Claimed. Found.	1.00 1.35	8.00 4.40	8.97	1.02	9.33	4.00 3.87	16.06 17.39	277
278	<b>Number Four, Tobacco, Potato, Onion and Truck Special</b> The Independent Packers' Fertilizer Co., Columbus, O.	Claimed. Found.	1.50 1.70	6.00 5.54	6.00	0.77	6.33	8.00 8.98	19.69 20.88	278
279	<b>Number Eight Phosphate and Potash</b> The Independent Packers' Fertilizer Co., Columbus, O.	Claimed. Found.	..... .....	10.00 10.93	11.80	0.32	11.25	2.00 2.30	12.88 14.19	279

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Percent.	Value.	Percent.	Value.	Percent.	Value.		
280	Number Nine Soluble Phosphate. The Independent Packers' Fertilizer Co., Columbus, O.	Claimed. Found.	.....	.....	14.00	.....	.....	.....	.....	.....	15.12	.....
281	Enterprise L. Frank & Sons, Zanesville, O.	Claimed. Found.	.....	.....	13.78	14.88	0.83	.....	.....	.....	14.88	280
282	Century L. Frank & Sons, Zanesville, O.	Claimed. Found.	2.00	.....	10.00	.....	1.00	.....	.....	.....	17.28	.....
284	Ohio Grange Phosphoric Acid. The G. E. Howell Provision Co., Newark, O.	Claimed. Found.	.....	.....	16.00	.....	.....	.....	.....	.....	18.23	281
285	High Grade Guano and Potash. The Jarecki Chemical Co., Sandusky and Cincinnati, O.	Claimed. Found.	.....	.....	17.08	18.45	1.53	.....	.....	.....	19.40	.....
286	Groves' Special Truck Manure. The Groves Co., Cincinnati, O.	Claimed. Found.	1.00	.....	8.00	.....	1.00	.....	7.00	.....	17.28	284
287	Bash's Tobacco and Truck Fertilizer. Bash Fertilizer Co., Ft. Wayne, Ind.	Claimed. Found.	0.95	3.10	9.01	9.73	1.79	.....	6.03	6.27	19.10	285
288	Special Corn Manure. S. M. Hess & Bro., Philadelphia, Pa.	Claimed. Found.	2.00	.....	8.00	.....	2.00	.....	8.00	.....	23.48	.....
			2.05	6.88	7.22	7.80	2.43	.....	8.35	8.68	23.82	286
			2.50	.....	6.00	.....	2.00	.....	10.00	.....	27.37	.....
			2.10	6.85	6.91	7.46	1.66	0.45	10.20	12.44	27.20	287
			1.00	.....	8.00	.....	1.50	.....	2.00	.....	13.98	.....
			1.20	3.91	8.31	8.97	1.85	0.50	2.41	2.51	16.89	288

289	Potash Mixture S. M. Hess & Bro., Philadelphia, Pa.....	Claimed. Found.	.....	.....	10.00	.....	1.50	.....	11.50	2.00	.....	12.88
			.....	.....	10.61	11.46	2.37	.....	12.98	2.31	.....	289 13.86
290	Big Potash Brand.....	Claimed.	1.50	.....	8.00	.....	2.00	.....	10.00	10.00	.....	24.47
	Darling & Company, Chicago, Ill.....	Found.	1.70	5.54	7.86	8.49	3.39	0.92	11.25	8.95	9.31	290 24.26
291	Vegetable and Lawn Fertilizer.....	Claimed.	4.00	.....	8.00	.....	2.00	.....	10.00	7.00	.....	29.50
	Darling & Company, Chicago, Ill.....	Found.	3.75	12.23	9.15	9.88	1.85	0.50	11.00	7.82	8.13	291 30.74
292	Western Chemical Gem Phosphate.....	Claimed.	1.00	.....	8.00	.....	1.00	.....	.....	7.00	.....	19.45
	The Smith Agri. Chem. Co., Columbus, O.....	Found.	0.93	3.03	7.70	8.32	1.79	.....	9.49	7.88	8.20	292 19.55
293	Western Chemical Standard Phosphate.....	Claimed.	1.50	.....	8.00	.....	1.00	.....	.....	2.00	.....	15.88
	The Smith Agri. Chem. Co., Columbus, O.....	Found.	1.40	4.56	7.52	8.12	1.56	.....	9.08	2.31	2.40	293 15.08
296	Chicago Fertilizer Co.'s B. B. and P. Brand.....	Claimed.	1.50	.....	8.00	.....	1.00	.....	.....	2.00	.....	15.88
	The Smith Agri. Chem. Co., Columbus, O.....	Found.	1.35	4.40	7.23	7.81	1.34	.....	8.57	2.06	2.14	296 14.35
297	North Western's Horse-Shoe Pure Ground Bone. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	3.00 3.10	10.11	9.48	10.24	12.20	.....	20.00	.....	.....	297 23.18
									6.59	21.68	.....	28.94
298	Farmers' Union Potato, Tobacco and Truck Manure.....	Claimed.	2.00	.....	8.00	.....	1.50	.....	9.50	5.00	.....	20.77
	The Amer. Agri. Chem. Co., Cleveland, O.....	Found.	2.20	7.17	8.44	9.12	2.30	0.62	10.74	5.49	5.71	298 22.62
299	Farmers' Union Erle Queen.....	Claimed.	.....	.....	12.00	.....	1.50	.....	13.50	.....	.....	12.96
	The Amer. Agri. Chem. Co., Cleveland, O.....	Found.	.....	.....	12.93	13.96	3.19	.....	16.12	.....	.....	299 13.96
300	Grain Grower.....	Claimed.	2.00	.....	8.00	.....	0.75	.....	.....	2.00	.....	17.44
	The Armour Fertilizer Works, Chicago, Ill....	Found.	1.78	5.80	7.86	8.49	2.23	0.60	10.09	2.14	2.23	300 17.12
301	Ammoniated Bone with Potash.....	Claimed.	3.00	.....	6.00	.....	0.50	.....	.....	2.00	.....	18.97
	The Armour Fertilizer Works, Chicago, Ill....	Found.	2.75	8.97	6.90	7.45	16.62	3.03	12.52	1.98	2.42	301 21.87
302	Wheat, Corn and Oats Special.....	Claimed.	1.00	.....	9.00	.....	0.75	.....	.....	1.00	.....	14.22
	The Armour Fertilizer Works, Chicago, Ill....	Found.	1.00	3.26	9.31	10.05	2.36	0.64	11.67	1.25	1.30	302 15.25

† From animal matter.

\* From sulphate.

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.	
			Percent.	Value.	Available.		Insoluble		Percent.	Value.		
					Percent.	Value.	Percent.	Value.				
303	Fruit and Root Crop Special. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	2.00 1.85	..... 6.03	8.00 6.58	..... 7.11	0.75 2.94	..... 9.52	5.00 5.61	..... 5.83	20.56 19.76	303
304	Bone, Blood and Potash. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	5.00 5.55	..... 18.09	8.00 7.92	..... 8.55	0.50 16.66	..... 14.58	7.00 5.43	..... 6.62	33.75 36.86	304
305	High Grade Potato. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	2.00 2.10	..... 6.85	8.00 9.01	..... 9.73	0.75 2.43	..... 11.44	10.00 9.41	..... 11.48	27.56 28.72	305
306	Celery and Potato Grower. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	1.00 1.00	..... 3.26	8.00 7.11	..... 7.68	0.75 1.40	..... 8.51	4.00 4.74	..... 4.93	16.26 16.25	306
307	Crop Grower The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	1.50 1.78	..... 5.80	8.00 8.33	..... 9.00	0.75 3.74	..... 12.07	2.00 2.66	..... 2.77	15.81 18.58	307
308	Bone and Potash Mixture. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	2.25 2.08	..... 6.78	9.98 9.98	..... 10.78	12.85 12.85	20.00 22.83	3.00 2.30	..... 2.39	23.86 26.89	308
312	Banner Brand The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	..... .....	..... .....	10.00 10.05	..... 10.85	0.50 0.44	..... 10.49	8.00 8.48	..... 8.82	19.12 19.67	312
313	Soluble Phosphate and Potash. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	..... .....	..... .....	10.00 9.53	..... 10.29	0.50 1.34	..... 10.87	4.00 4.38	..... 4.56	14.96 14.85	313
314	Phosphate and Potash. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	..... .....	..... .....	10.00 11.38	..... 12.29	0.50 0.51	..... 11.88	2.00 1.81	..... 1.88	12.88 14.17	314

315	Star Phosphate The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	..... .....	..... .....	14.00 13.30	..... .....	0.50 0.90	..... .....	..... 14.20	..... .....	..... .....	15.12 14.36	..... 315
316	U. S. Phosphate The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	..... .....	..... .....	12.00 11.96	..... .....	0.50 0.83	..... .....	..... 12.79	..... .....	..... .....	12.96 12.92	..... 316
318	Sheep Manure The A.mour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	3.00 2.95	..... 9.62	..... 1.27	..... 1.37	..... 0.26	..... 0.14	..... 1.53	..... 1.75	..... 1.76	12.94 12.96	..... 318
319	Potash Truckee The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	1.00 1.35	..... 4.40	8.00 8.31	..... 8.97	0.75 1.50	..... 0.41	..... 9.81	8.00 7.03	..... 7.31	20.42 21.09	..... 319
320	Tuscarora Fert. Co.'s Standard The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	2.00 1.65	..... 5.38	8.00 7.10	..... 7.67	0.75 1.85	..... 0.50	..... 8.95	2.00 2.60	..... 2.70	17.44 16.25	..... 320
321	Tuscarora Fert. Co.'s Fruit and Potato The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	2.00 2.30	..... 7.50	8.00 8.06	..... 8.70	0.75 1.08	..... 0.29	..... 9.14	10.00 10.12	..... 10.52	25.76 27.01	..... 321
322	Tuscarora Fert. Co.'s Steamed Bone Meal The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	2.00 3.65	..... 11.90	..... 10.51	..... 11.35	..... 12.07	..... 6.52	..... 22.58	..... 20.00	..... .....	19.92 29.77	..... 322
323	Tuscarora Fert. Co.'s Acid Phosphate The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	..... .....	..... .....	14.00 12.31	..... 13.29	0.50 1.05	..... .....	..... 13.36	..... .....	..... .....	15.12 13.29	..... 323
324	Tuscarora Fert. Co.'s Big Four The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	2.00 2.70	..... 8.80	7.00 6.08	..... 6.57	0.75 3.13	..... 0.85	..... 9.21	4.00 *4.09	..... 4.99	19.16 21.21	..... 324
325	Tuscarora Fert. Co.'s Soluble Phosphate and Potash The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	..... .....	..... .....	10.00 9.53	..... 10.29	0.50 1.08	..... .....	..... 10.61	4.00 4.11	..... 4.27	14.96 14.56	..... 325
327	Bradley's B. D. Sea Fowl Fertilizer The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.55	..... 8.31	8.00 8.24	..... 8.90	1.50 1.92	..... 0.52	..... 10.16	1.50 1.99	..... 2.07	18.76 19.80	..... 327
328	Zell's Little Giant The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.35	..... 4.40	9.00 9.21	..... 9.95	1.50 2.17	..... .....	..... 10.50	1.00 1.37	..... 1.42	14.43 15.77	..... 328

† From animal matter.

\* From sulphate.

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Percent.	Value.	Percent.	Value.		
329	Wheat Special The M. Hamm Co., Washington C. H., O.....	Claimed. Found.	.....	.....	18.00	.....	1.00	.....	.....	.....	19.44	.....
			.....	.....	19.38	20.93	0.38	.....	.....	.....	20.93	329
330	Hardy's Imperial Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00	.....	8.00	.....	1.00	.....	7.00	.....	19.45	.....
			0.90	2.93	8.62	9.31	1.53	0.41	10.15	4.67	17.51	330
331	Rickard's Best Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	2.00	.....	10.00	.....	.....	.....	4.00	.....	21.48	.....
			2.00	6.52	9.52	10.28	0.77	0.21	10.29	4.57	21.76	331
332	Calumet Brand High Grade Garden and Vegetable Manure Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	2.50	.....	8.00	.....	1.00	.....	.....	.....	23.57	.....
			2.18	7.11	9.46	10.22	10.90	0.49	10.36	7.22	25.33	332
333	Eagle Potash Special. Louisville Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00	.....	7.00	.....	.....	.....	.....	.....	19.36	.....
			1.05	3.42	5.79	6.25	3.19	.....	8.98	*10.26	22.19	333
334	Eagle Grain Grower. Louisville Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00	.....	7.00	.....	.....	.....	.....	.....	15.70	.....
			1.20	3.91	7.67	8.28	5.38	1.45	13.05	*3.28	17.64	334
335	Peerless Onion and Celery Grower. The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	2.00	.....	8.00	.....	1.50	.....	9.50	10.00	25.97	.....
			1.80	5.87	7.57	8.18	2.02	.....	9.59	9.77	24.21	335
336	Peerless Corn, Wheat and Grass Grower. The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	1.00	.....	8.00	.....	1.50	.....	9.50	2.00	14.39	.....
			1.20	3.91	8.43	9.10	1.72	.....	10.15	1.99	15.08	336

337	Peerless Vegetable Grower..... The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	1.50 1.45	..... 4.73	8.00 8.48	..... 9.16	1.50 2.36	..... 0.64	9.50 10.84	7.00 6.92	..... 7.20	21.22 21.73	..... 337
338	Thomas' Wheat and Corn..... I. P. Thomas & Son Co., Philadelphia, Pa.....	Claimed. Found.	1.00 1.15	..... 3.75	9.00 7.86	..... 8.49	..... 1.53	..... .....	10.00 9.39	3.00 2.95	..... 3.07	16.10 15.31	..... 338
339	Improved Superphosphate..... I. P. Thomas & Son Co., Philadelphia, Pa.....	Claimed. Found.	1.00 1.05	..... 3.42	9.00 9.12	..... 8.85	..... 1.43	..... .....	10.00 10.55	2.00 2.35	..... 2.44	15.06 15.71	..... 339
340	Potato, Tobacco and Corn..... I. P. Thomas & Son Co., Philadelphia, Pa.....	Claimed. Found.	2.00 2.40	..... 7.82	8.00 8.25	..... 8.91	..... 1.02	..... 0.28	9.00 9.27	5.00 *4.32	..... 5.27	21.26 22.28	..... 340
341	Special Alkaline..... I. P. Thomas & Son Co., Philadelphia, Pa.....	Claimed. Found.	..... .....	..... .....	10.00 9.50	..... 10.26	..... 1.40	..... .....	11.00 10.90	4.00 4.03	..... 4.19	14.96 14.45	..... 341
342	Pure Bone..... E. Rauh & Sons Fert. Co., Indianapolis, Ind.....	Claimed. Found.	2.00 2.15	..... 7.01	..... 10.76	..... 11.62	..... *17.65	..... 9.53	22.00 28.41	..... .....	..... .....	21.26 28.16	..... 342
343	Phosphate and Potash..... E. Rauh & Sons Fert. Co., Indianapolis, Ind.....	Claimed. Found.	..... .....	..... .....	10.00 10.33	..... 11.16	..... 2.78	..... .....	..... 13.11	2.00 1.74	..... 1.81	12.88 12.97	..... 343
344	Ohio Grange Truck Grower..... The G. E. Howell Provision Co., Newark, O.....	Claimed. Found.	3.00 2.40	..... 7.82	6.00 6.63	..... 7.16	2.00 3.46	..... 0.93	8.00 10.09	10.00 9.28	..... 9.65	27.20 25.56	..... 344
345	Ohio Grange Corn, Wheat and Grass..... The G. E. Howell Provision Co., Newark, O.....	Claimed. Found.	1.00 0.68	..... 2.22	8.00 7.11	..... 7.68	1.00 3.19	..... .....	9.00 10.30	4.00 3.45	..... 3.59	16.33 13.49	..... 345
346	Seneca Potato and Vegetable Manure..... The Seneca Fertilizer Co., Tiffin, O.....	Claimed. Found.	1.50 1.95	..... 6.36	8.00 8.25	..... 8.91	2.00 *2.30	..... 1.24	10.00 10.55	6.00 *6.53	..... 7.97	21.39 24.48	..... 346
347	Corn and Wheat Fertilizer..... The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	1.50 1.50	..... 4.89	5.00 5.36	..... 5.79	..... 0.26	..... .....	..... 5.62	5.00 5.75	..... 5.98	15.49 16.66	..... 347
348	Vegetable and Grain Fertilizer..... The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	3.00 2.48	..... 8.08	..... .....	..... .....	..... .....	..... .....	..... .....	4.00 6.57	..... 6.83	13.94 14.91	..... 348
349	Ammoniate Fertilizer with Potash..... The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	3.00 2.83	..... 9.23	..... .....	..... .....	..... .....	..... .....	..... .....	3.00 3.72	..... 3.87	12.90 13.10	..... 349

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Available.	Insoluble.	Total Percent.	Percent.	Value.		
350	General Crop The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	2.00 1.85	6.03	..... 8.37	..... 0.35	..... 0.32	..... 8.00	..... 2.00	..... 2.79	13.96 9.17	350
352	Stadler's Pure Bone Meal J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	3.50 3.85	..... 12.55	..... 19.72	..... 10.01	..... 5.25	20.00 18.99	..... .....	..... .....	24.81 27.81	..... 352
353	Stadler's Vegetable Manure J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	2.50 2.70	..... 8.80	0.77 3.25	..... 9.33	..... 8.84	10.00 11.89	8.00 7.86	..... 8.17	26.86 27.18	..... 353
354	Stadler's Valley Phosphate J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	2.50 2.70	..... 8.80	0.77 1.66	..... 9.26	..... 8.57	10.00 10.23	4.00 4.49	..... 4.67	22.70 23.18	..... 354
355	Stadler's Corn and Wheat Special J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	1.00 1.20	..... 3.91	1.25 2.23	..... 7.64	..... 7.07	9.25 9.30	4.00 4.63	..... 4.87	16.74 17.02	..... 355
356	Stadler's Acid Phosphate and Potash J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	..... .....	..... .....	1.00 1.40	..... 10.84	..... 10.04	10.00 11.44	3.00 3.16	..... 3.29	12.84 14.13	..... 356
357	Stadler's Acid Phosphate J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	..... .....	..... .....	1.00 0.96	..... 16.78	14.00 15.54	15.00 16.50	..... .....	..... .....	15.12 18.78	..... 357



358	Ten-Five Brand Darling & Company, Chicago, Ill.	Claimed. Found.	..... .....	10.00 9.97	10.77 0.39	..... .....	..... .....	5.00 5.20	..... .....	16.00 16.18	..... 358
359	High Grade Acid Phosphate. Darling & Company, Chicago, Ill.	Claimed. Found.	..... .....	14.00 13.79	..... 14.89	..... 1.72	..... 15.51	..... .....	..... .....	15.12 14.89	..... 359
360	Phosphate and Potash. Darling & Company, Chicago, Ill.	Claimed. Found.	..... .....	10.00 11.12	..... 12.01	..... 0.19	..... 11.31	2.00 1.62	..... .....	12.88 23.89	..... 360
361	Sure Winner Brand. Darling & Company, Chicago, Ill.	Claimed. Found.	1.00 1.30	..... 4.24	..... 9.15	..... 9.38	..... 0.64	3.00 3.20	..... .....	15.56 18.09	..... 361
362	General Crop Brand. Darling & Company, Chicago, Ill.	Claimed. Found.	1.00 1.25	..... 4.08	..... 8.22	..... 8.88	..... 0.77	6.00 6.28	..... .....	18.68 20.26	..... 362
363	Farmers' Favorite Brand. Darling & Company, Chicago, Ill.	Claimed. Found.	3.00 2.85	..... 9.29	..... 9.37	..... 10.12	..... 1.21	4.00 4.01	..... .....	23.12 24.79	..... 363
364	Chicago Brand Darling & Company, Chicago, Ill.	Claimed. Found.	2.00 2.25	..... 7.34	..... 8.00	..... 9.05	..... 0.77	2.00 2.30	..... .....	17.78 19.55	..... 364
365	Two and Twenty Bone Darling & Company, Chicago, Ill.	Claimed. Found.	2.00 2.20	..... 7.17	..... 7.11	..... 7.68	..... 12.27	..... 6.63	..... 19.38	18.58 21.48	..... 365
367	Thomas' Phosphate Powder (Basic Slag Phosphate) The Coe-Mortimer Co., New York, N. Y.	Claimed. Found.	..... .....	..... .....	15.00 6.75	..... 7.29	..... 9.72	..... .....	..... .....	16.20 7.29	..... 367
368	Keystone Phosphate S. M. Hess & Bro., Philadelphia, Pa.	Claimed. Found.	1.00 1.20	..... 3.91	..... 9.15	..... 9.88	..... 4.02	2.00 1.02	..... .....	13.98 14.86	..... 368
369	Crocker's Ammoniated Wheat and Corn Phosphate The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	2.50 2.65	..... 8.64	..... 7.99	..... 8.63	..... 1.85	1.50 1.97	..... .....	18.76 19.82	..... 369
370	Hardy's Security Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	14.00 14.84	..... 16.03	..... 1.72	..... .....	..... .....	15.12 16.03	..... 370

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.	
371	Wheeler's Peerless Acid Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	14.00	.....	1.50	15.50	.....	.....	15.12
			.....	.....	15.44	16.68	1.73	17.17	.....	.....	16.68
373	North Western's Horse Shoe Potato Grower. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.00	6.78	8.00	.....	1.50	9.50	5.00	.....	20.77
			2.08	.....	7.60	8.21	1.79	9.39	5.23	5.44	20.91
374	High Grade Acid Phosphate. Morris & Company, Chicago, Ill.....	Claimed. Found.	.....	.....	14.00	.....	1.46	15.48	.....	.....	15.12
			.....	.....	14.02	15.14	.....	.....	.....	.....	15.14
376	Big Seven Special Bone Meal and Potash. Morris & Company, Chicago, Ill.....	Claimed. Found.	1.50	.....	.....	.....	.....	16.00	3.00	.....	19.27
			1.55	5.05	7.22	7.80	17.04	14.26	2.89	3.53	20.18
377	High Grade Guano. The Cincinnati Phosphate Co., Cincinnati, O..	Claimed. Found.	1.50	.....	8.00	.....	1.00	.....	2.50	.....	16.40
			1.65	5.38	8.76	9.46	1.66	10.42	2.80	2.91	18.20
378	Special Sugar Beet Grower. The Jarecki Chemical Co., Sandusky and Cincinnati, O. ....	Claimed. Found.	1.00	.....	8.00	.....	1.00	9.00	4.00	.....	16.06
			1.15	3.75	9.21	9.95	1.21	10.42	3.97	4.13	17.83
379	Pioneer High Grade Acid Phosphate. Pioneer Fertilizer Co., Chicago, Ill.....	Claimed. Found.	.....	.....	14.00	.....	1.00	15.00	.....	.....	15.12
			.....	.....	13.96	15.08	1.59	15.55	.....	.....	15.08
380	Acid Phosphate American Reduction Co., Pittsburg, Pa.....	Claimed. Found.	.....	.....	12.00	.....	1.00	13.00	.....	.....	12.96
			.....	.....	13.11	14.16	0.06	13.17	.....	.....	14.16

384	Phosphate and Potash. The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	.....	.....	9.00	.....	1.00	.....	10.00	3.00	.....	12.84	.....	384
			.....	.....	10.23	.....	1.66	.....	11.89	2.76	.....	2.87	13.92	
385	Farmers' Friend Phosphate. The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	.....	.....	14.00	.....	1.00	.....	15.00	.....	.....	15.12	.....	385
			.....	.....	10.93	.....	2.05	.....	12.98	.....	.....	.....	11.80	
386	Raw Bone, Phosphate and Potash. The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	2.00 2.30	..... 7.50	8.00 11.97	..... .....	8.00 5.81	..... 1.57	16.00 17.78	3.00 3.51	..... 3.65	22.60 25.65	.....	386
387	Complete General Crop. The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	1.00 1.40	..... 4.56	8.00 8.12	..... 8.77	1.00 0.83	.....	9.00 8.95	2.00 3.22	..... 3.35	13.98 16.68	.....	387
388	Gold Standard The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	1.00 0.65	..... 2.12	8.00 11.18	..... 12.07	1.00 1.40	.....	9.00 12.58	4.00 3.85	..... 4.00	16.06 18.19	.....	388
389	Potato and Truck Manure. The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	1.00 0.70	..... 2.28	8.00 7.67	..... 8.28	1.00 0.64	.....	9.00 8.31	8.00 10.73	..... 11.16	20.22 21.72	.....	389
391	Vegetable and Tobacco Manure. Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	1.00 1.50	..... 4.89	8.00 8.44	..... 9.12	1.50 1.21	.....	9.50 9.65	7.00 6.84	..... 7.11	19.59 21.12	.....	391
392	Herrick's Fertilizer with Potash. Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	2.00 2.25	..... 7.34	8.00 7.86	..... 8.49	1.50 1.98	.....	9.50 9.84	2.00 2.41	..... 2.51	17.65 18.87	.....	392
393	Common Sense American Reduction Co., Pittsburg, Pa.....	Claimed. Found.	1.50 1.48	..... 4.82	7.00 6.30	..... 6.80	1.00 1.69	.....	8.00 7.99	1.00 1.74	..... 1.81	13.49 13.89	.....	393
394	Pacific's Potato Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 7.86	..... 8.49	1.50 1.53	.....	9.50 9.39	4.00 4.33	..... 4.50	16.47 17.31	.....	394
396	Rickard's Dissolved Phosphate and Potash. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	.....	.....	12.00	.....	.....	.....	.....	4.00	.....	17.12	.....	396
			.....	.....	11.34	.....	0.90	.....	12.24	4.55	.....	4.73	16.98	
397	Tuscarora Fert. Co.'s Ammoniated Phosphate. The Armour Fertilizer Works, Chicago Ill....	Claimed. Found.	1.00 1.40	..... 4.56	9.00 7.10	..... 7.67	0.75 3.13	.....	..... 10.23	1.00 1.52	..... 1.58	14.22 14.66	.....	397
398	Tuscarora Fert. Co.'s Chief. The Armour Fertilizer Works, Chicago Ill....	Claimed. Found.	1.00 1.00	..... 3.26	8.00 7.77	..... 8.39	0.75 1.69	.....	..... 9.46	4.00 3.84	..... 3.99	16.26 16.10	.....	398

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.		
400	S. C. Phosphate..... I. P. Thomas & Son Co., Philadelphia, Pa.....	Claimed. Found.	.....	.....	14.00 15.10	16.31	1.00 0.96	15.00 16.06	.....	.....	15.12 16.31	400
401	Ground Bone ..... The Cincinnati Phos. Co., Cincinnati, O.....	Claimed. Found.	3.00 2.65	8.64	9.61	10.38	12.07	20.00 21.68	.....	.....	23.18 25.54	401
402	Groves' Pure Ground Bone..... Groves & Company, Cincinnati, O.....	Claimed. Found.	3.00 2.80	9.13	9.27	10.01	14.20	20.00 23.47	.....	.....	23.18 26.81	402
403	Alkaline Phosphate ..... The Cincinnati Phos. Co., Cincinnati, O.....	Claimed. Found.	.....	.....	10.00 10.36	11.19	1.00 2.75	.....	2.00 2.12	..... 2.20	12.88 13.39	403
404	Bone and Phosphate Mixture Wheat Special..... The Cincinnati Phos. Co., Cincinnati, O.....	Claimed. Found.	2.00 2.10	6.85	9.53	10.29	6.72	16.25	1.00 1.54	..... 1.60	21.60 20.55	404
405	Valley Gem Phosphate..... The Queen City Fert. Co., Cincinnati, O.....	Claimed. Found.	1.00 1.00	.....	8.00 7.54	8.14	1.00 2.11	.....	2.00 2.16	..... 2.25	14.25 14.22	405
406	Globe Acid Phosphate..... Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	.....	.....	14.00 15.99	17.27	0.44	16.43	.....	.....	15.12 17.27	406
407	Globe Universal Crop and Tobacco Grower..... Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00 1.20	.....	8.00 8.56	9.24	0.96	.....	4.00 4.30	..... 5.25	16.78 18.40	407
408	Globe Grain Grower..... Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00 1.25	.....	9.00 9.03	9.75	1.46	10.49	1.00 2.19	..... 2.67	14.20 16.50	408

409	Globe Vegetable Grower..... Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00 1.08	3.52 9.32	8.00 10.07	..... 0.84	..... 10.16	8.00 *6.76	..... 8.25	21.66 21.84	..... 409		
410	Braden Formula ..... Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	1.00 1.25	..... 4.08	11.00 11.83	..... 1.15	..... 12.98	3.00 *2.39	..... 2.92	18.80 19.78	..... 410		
411	Bowker's Black Diamond..... The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	..... .....	..... 15.10	14.00 16.31	1.50 1.46	..... 16.56	..... .....	..... .....	15.12 16.31	..... 411		
412	Ammoniated Phosphate ..... The Packers' Fertilizer Co., Cincinnati, O.....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 8.57	..... 9.26	..... 0.62	..... 10.87	2.00 2.16	..... 2.25	14.25 15.72	..... 412	
413	Eagle Corn and Wheat Grower..... Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	2.00 1.70	..... 5.54	8.00 8.04	..... 8.68	..... 0.74	..... 8.78	2.00 *2.55	..... 3.11	17.60 17.33	..... 413	
414	Chicago Fert. Co.'s New Leader..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 1.05	..... 3.42	8.00 8.19	..... 8.85	..... 1.46	..... 0.39	7.00 7.17	..... 7.46	19.45 20.12	..... 414	
415	Daybreak Wheat and Corn Special..... Federal Chemical Co., Louisville, Ky.....	Claimed. Found.	1.00 0.60	..... 1.96	8.00 11.31	..... 12.21	..... 0.83	..... .....	2.00 *1.37	..... 1.87	14.34 15.84	..... 415	
416	Union Steamed Bone Meal..... American Glue Co., Chicago, Ill.....	Claimed. Found.	0.75 0.90	..... 2.93	17.00 14.74	..... 15.92	15.00 †18.71	..... 10.10	..... 32.00	..... 33.45	..... 28.91	..... 416	
417	Seneca John's Tax Payer..... The Seneca Fertilizer Co., Tiffin, O.....	Claimed. Found.	..... .....	..... 11.02	10.00 11.02	..... 11.90	2.00 0.87	..... .....	2.00 *4.07	..... 4.97	13.24 16.87	..... 417	
418	Seneca Acidulated Pure Bone..... The Seneca Fertilizer Co., Tiffin, O.....	Claimed. Found.	3.00 4.25	..... 13.86	10.00 9.67	..... 10.44	13.00 †11.57	..... 6.25	23.00 21.24	..... .....	27.60 30.55	..... 418	
419	Seneca Wheat Grower No. 1..... The Seneca Fertilizer Co., Tiffin, O.....	Claimed. Found.	2.00 2.28	..... 7.43	10.00 8.55	..... 9.23	3.00 5.71	..... 1.54	13.00 14.26	2.00 3.35	..... 3.48	21.02 21.68	..... 419
420	Seneca High Grade Phosphate..... The Seneca Fertilizer Co., Tiffin, O.....	Claimed. Found.	..... .....	..... 17.58	16.00 17.58	..... 18.99	3.00 0.26	..... .....	..... .....	..... .....	17.28 18.99	..... 420	
421	Seneca All Crop Special..... The Seneca Fertilizer Co., Tiffin, O.....	Claimed. Found.	1.00 1.15	..... 3.75	10.00 9.18	..... 9.91	2.00 2.14	..... .....	1.00 *1.10	..... 1.34	15.28 15.00	..... 421	

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Available.	Insoluble.	Total Percent.		Percent.	Value.		
422	Victor Potash Manure.....	Claimed.	1.00	.....	8.00	.....	9.00	.....	5.00	.....	17.10	.....
	I. P. Thomas & Son Co., Philadelphia, Pa.....	Found.	1.20	3.91	7.93	1.02	8.95	.....	5.01	5.21	17.68	422
423	Wheat Special .....	Claimed.	0.50	.....	12.00	.....	13.00	.....	.....	.....	14.59	.....
	I. P. Thomas & Son Co., Philadelphia, Pa.....	Found.	0.75	2.45	12.41	0.70	13.11	.....	.....	.....	15.85	423
424	Anti Trust .....	Claimed.	1.00	.....	9.00	1.00	10.00	.....	1.00	.....	14.02	.....
	L. Frank & Sons, Zanesville, O.....	Found.	1.35	4.40	9.15	2.68	11.83	0.72	0.98	1.02	16.02	424
425	Ten Two .....	Claimed.	.....	.....	10.00	1.00	11.00	.....	2.00	.....	12.88	.....
	L. Frank & Sons, Zanesville, O.....	Found.	.....	.....	10.07	0.64	10.71	.....	1.85	1.92	12.80	425
426	Williams & Clark's Americus Royal Phosphate..	Claimed.	1.00	.....	9.00	1.50	10.50	.....	2.00	.....	15.47	.....
	The Amer. Agrl. Chem. Co., Cleveland, O.....	Found.	1.05	3.42	8.89	2.17	11.06	0.59	1.67	1.74	15.35	426
427	Pacific's Dissolved Phosphate and Potash.....	Claimed.	.....	.....	10.00	1.50	11.50	.....	2.00	.....	12.88	.....
	The Amer. Agrl. Chem. Co., Cleveland, O.....	Found.	.....	.....	9.28	1.72	11.00	0.46	2.30	2.39	12.87	427
428	Packers' Union American Wheat and Rye Grower .....	Claimed.	1.00	.....	8.00	1.50	9.50	.....	2.00	.....	14.39	.....
	The Amer. Agrl. Chem. Co., Cleveland, O.....	Found.	1.05	3.42	7.67	1.66	9.33	0.45	2.08	2.16	14.31	428
429	Packers' Union Superior Acid Phosphate.....	Claimed.	.....	.....	14.00	1.50	15.50	.....	.....	.....	15.12	.....
	The Amer. Agrl. Chem. Co., Cleveland, O.....	Found.	.....	.....	15.00	1.86	16.86	.....	.....	.....	16.20	429

430	Packers' Union Potato Manure..... The Amer. Agrl. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.20	..... 7.17	8.00 8.18	..... 8.83	1.50 1.34	..... 0.36	9.50 9.52	6.00 5.66	..... 5.89	23.44 22.25	..... 430
431	Packers' Union Animal Corn Fertilizer..... The Amer. Agrl. Chem. Co., Cleveland, O.....	Claimed. Found.	3.00 3.30	..... 10.76	9.00 9.98	..... 10.78	1.50 1.66	..... 0.45	10.50 11.64	2.00 2.29	..... 2.38	21.99 24.37	..... 431
432	Peerless Dissolved Bone Phosphate with Potash. The Canton Fert. and Chem. Co., Canton, O....	Claimed. Found.	..... .....	..... .....	10.00 9.33	..... 10.08	..... 0.90	..... .....	..... 10.23	2.00 1.79	..... 1.86	12.88 11.94	..... 432
433	Peerless Dissolved Bone Phosphate..... The Canton Fert. and Chem. Co., Canton, O....	Claimed. Found.	..... .....	..... .....	12.00 12.31	..... 13.29	..... 1.50	..... .....	..... 13.81	..... .....	..... .....	12.96 13.29	..... 433
434	Potato and Truck Manure..... S. M. Hess & Bro., Philadelphia, Pa.....	Claimed. Found.	3.00 3.10	..... 10.11	8.00 7.93	..... 8.56	1.50 1.28	..... 0.35	9.50 9.21	6.00 5.63	..... 5.86	24.66 24.88	..... 434
435	Ammoniated Superphosphate..... S. M. Hess & Bro., Philadelphia, Pa.....	Claimed. Found.	2.00 2.10	..... 6.85	8.00 7.99	..... 8.63	1.50 1.79	..... 0.48	9.50 9.78	2.00 2.20	..... 2.29	17.24 18.25	..... 435
436	Special Compound..... S. M. Hess & Bro., Philadelphia, Pa.....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 8.31	..... 8.97	1.50 1.28	..... 0.35	9.50 9.59	4.00 4.05	..... 4.21	16.06 17.12	..... 436
437	Swift's Pulverized Sheep Manure..... Swift & Company, Chicago, Ill.....	Claimed. Found.	3.00 3.60	..... 11.74	..... 1.86	..... 2.01	..... 0.19	..... 0.10	2.00 2.05	2.00 1.93	..... 2.01	13.20 15.86	..... 437
438	Farmers' Union Dissolved Phosphate and Potash. The Amer. Agrl. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.84	..... 10.63	1.50 2.30	..... .....	11.50 12.14	2.00 2.24	..... 2.33	12.88 12.96	..... 438
439	Groves' Fine Ground Bone and Potash..... The Groves Co., Cincinnati, O.....	Claimed. Found.	1.00 0.85	..... 2.77	..... 10.31	..... 11.13	..... 16.43	..... 8.87	16.00 26.74	5.00 4.03	..... 4.19	19.18 26.96	..... 439
440	Groves' Favorite Fertilizer..... The Groves Co., Cincinnati, O.....	Claimed. Found.	2.00 2.05	..... 6.68	8.00 7.15	..... 7.72	2.00 3.00	..... 0.81	10.00 10.15	2.00 2.60	..... 2.70	17.24 17.91	..... 440
441	Liquid Fertilizer..... The National Chem. & Seed Co., Columbus, O.	Claimed. Found.	4.00 3.40	..... 11.08	10.00 10.23	..... 11.05	..... .....	..... .....	10.00 10.23	4.00 7.07	..... 7.35	28.00 29.48	..... 441
442	Martin's Potash and Soluble Phosphate..... D. B. Martin Co., Philadelphia, Pa.....	Claimed. Found.	..... .....	..... .....	12.00 11.57	..... 12.50	..... .....	..... .....	..... 11.57	5.00 3.51	..... 3.65	18.16 16.15	..... 442

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.		
443	Potato and Truck Manure. International Seed Co., Rochester, N. Y.....	Claimed. Found.	1.50 1.45	..... 4.73	8.00 8.69	..... 9.39	1.50 1.28	..... 0.35	7.00 7.15	..... 7.44	21.22 21.91	443
444	Miami Valley Grain Grower. The Queen City Fertilizer Co., Cincinnati, O....	Claimed. Found.	1.50 1.65	..... 5.38	8.00 9.14	..... 9.87	1.00 1.79	..... 0.48	2.50 2.62	..... 2.72	16.40 18.46	444
445	Rupp's Bone and Blood Fertilizer. Geo. Rupp & Co., Hamilton, O.....	Claimed. Found.	5.00 5.00	..... 16.30	..... 8.45	..... 9.13	..... 11.64	..... 6.29	..... 21.11	..... .....	30.44 31.72	445
446	Pure Animal Fertilizer. The Harveysburg Fert. Co., Harveysburg, O....	Claimed. Found.	4.00 5.60	..... 18.26	..... 7.71	..... 8.33	..... 10.84	..... 5.85	..... 16.00	..... .....	23.76 32.44	446
447	Packers' Union Universal Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	..... 3.91	8.00 8.66	..... 9.35	1.50 1.53	..... .....	4.00 4.27	..... 4.44	16.47 17.70	447
448	Bowker's Pure Bone and Potash Mixture. The Amer. Agri. Chem. Co., Cincinnati, O.....	Claimed. Found.	1.00 0.80	..... 2.61	..... 7.72	..... 8.34	..... 14.99	..... 2.69	3.00 6.45	..... 6.71	18.44 20.35	448
449	Potash Special Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	..... .....	..... 10.00	10.00 11.45	..... 12.37	..... 0.38	..... .....	2.00 *1.97	..... 2.40	13.24 14.77	449
450	Corn and Potato Fertilizer. Pittsburg Provision and Packing Co., Pittsburg, Pa. ....	Claimed. Found.	1.75 2.20	..... 7.17	9.00 7.26	..... 7.84	2.00 1.31	..... 0.35	3.00 3.47	..... 3.61	19.09 18.97	450



452	Special Potato Fertilizer..... Pittsburg Provision and Packing Co., Pitts- burg, Pa. ....	Claimed. Found.	2.00 2.75	..... 8.97	9.00 9.46	..... 10.22	1.00 2.68	..... 0.72	10.00 12.14	7.00 *5.72	..... 8.98	25.05 26.89	..... 452
453	Guano Fertilizer..... Pittsburg Provision and Packing Co., Pitts- burg, Pa. ....	Claimed. Found.	1.75 2.20	..... 7.17	9.00 6.78	..... 7.32	2.00 1.85	..... 0.50	11.00 8.63	..... .....	..... .....	15.97 14.99	..... 453
454	Wheat and Grass Manure..... S. M. Hess & Bro., Philadelphia, Pa. ....	Claimed. Found.	1.00 1.18	..... 3.85	8.00 8.31	..... 9.51	1.50 1.34	..... 0.36	9.50 10.15	2.00 2.34	..... 2.43	13.98 16.15	..... 454
455	Number Seven Corn and Wheat Special..... The Independent Packers' Fertilizer Co., Co- lumbus, O. ....	Claimed. Found.	1.00 1.00	..... 3.26	8.00 9.37	..... 10.12	..... 0.19	..... .....	..... 9.56	2.00 2.20	..... 2.29	13.98 15.67	..... 455
456	Wheat Grower..... The Cincinnati Phosphate Co., Cincinnati, O. ....	Claimed. Found.	..... .....	..... .....	12.00 12.47	..... 13.47	1.00 4.16	..... .....	..... 16.63	..... .....	..... .....	12.96 13.47	..... 456
457	Ohio Farmers' Excelsior Phosphate..... The Smith Agri. Chem. Co., Columbus, O. ....	Claimed. Found.	1.00 0.96	..... 3.10	8.00 8.06	..... 8.70	1.00 1.40	..... 0.38	..... 9.46	7.00 7.46	..... 7.76	19.45 19.94	..... 457
458	Abbott and Martin's Universal Fertilizer..... The Smith Agri. Chem. Co., Columbus, O. ....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 9.00	..... 9.72	1.00 0.90	..... 0.24	..... 9.90	4.00 4.39	..... 4.57	16.33 18.12	..... 458
459	Abbott and Martin's Hercules Phosphate..... The Smith Agri. Chem. Co., Columbus, O. ....	Claimed. Found.	..... .....	..... .....	14.00 15.19	..... 16.41	1.00 1.79	..... .....	..... 16.98	..... .....	..... .....	15.12 16.41	..... 459
460	Sweepstakes..... The Packers' Fertilizer Co., Cincinnati, O. ....	Claimed. Found.	1.50 2.00	..... 6.52	8.00 7.93	..... 8.56	1.00 1.02	..... 0.28	..... 8.95	2.50 *3.49	..... 4.26	16.85 19.62	..... 460
461	Square Deal Fertilizer..... I. P. Thomas & Son Co., Philadelphia, Pa. ....	Claimed. Found.	..... .....	..... .....	9.00 9.78	..... 10.56	..... 0.83	..... .....	..... 10.61	3.00 3.55	..... 3.69	12.84 14.25	..... 461
462	Complete Potato Fertilizer..... The Roberts Fertilizer Co., Pittsburg, Pa. ....	Claimed. Found.	2.00 2.00	..... 6.52	7.00 7.15	..... 7.72	..... 0.96	..... 0.26	..... 8.11	2.00 4.16	..... 4.33	16.16 18.83	..... 462
463	Tobacco and Truck..... The Edward Slover Fert. Co., Camden, O. ....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 8.27	..... 8.93	1.00 0.84	..... .....	9.00 9.11	7.00 *7.05	..... 8.60	20.44 21.12	..... 463

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Available.	Insoluble.	Percent.	Value.	
464	<b>Favorite Brand</b> The Edward Slover Fert. Co., Camden, O....	Claimed. Found.	2.00 2.25	..... 7.34	10.00 11.76	..... 12.70	..... 3.52	..... 0.95	2.50 2.12	..... 2.20	..... 464
465	<b>Wheat Special</b> The Edward Slover Fert. Co., Camden, O....	Claimed. Found.	1.00 1.13	..... 3.68	9.00 9.72	..... 10.50	..... 0.83	.....	2.00 2.26	..... 2.35	..... 465
466	<b>Thirteen and Two</b> The Edward Slover Fert. Co., Camden, O....	Claimed. Found.	..... .....	..... .....	13.00 13.82	..... 14.93	..... 0.38	.....	2.00 2.04	..... 2.12	..... 466
467	<b>Fox Grain Grower</b> Fox Chemical Co., Louisville, Ky.....	Claimed. Found.	1.00 1.45	..... 4.73	9.00 8.64	..... 9.33	..... 0.89	.....	1.00 1.72	..... 1.79	..... 467
468	<b>Corn, Oats and Wheat Fertilizer</b> Muskingum Valley Fert. Co., Marietta, O.....	Claimed. Found.	1.00 1.05	..... 3.42	10.00 11.76	..... 12.70	..... 0.57	.....	1.00 1.83	..... 1.90	..... 468
469	<b>Acid Phosphate</b> Muskingum Valley Fert. Co., Marietta, O.....	Claimed. Found.	..... .....	..... .....	12.00 14.00	..... 15.12	..... 0.26	.....	..... .....	..... .....	..... 469
470	<b>International Phosphate</b> Western Union Chemical Co., Cleveland, O....	Claimed. Found.	..... .....	..... .....	14.00 14.65	..... 15.82	..... 2.11	.....	..... .....	..... .....	..... 470
471	<b>Grain and Potato Grower</b> Western Union Chemical Co., Cleveland, O....	Claimed. Found.	1.00 1.00	..... 3.26	8.00 8.12	..... 8.77	..... 1.50	..... 0.34	4.00 4.14	..... 4.31	..... 471
476	<b>Pure Bone with Phosphate and Potash</b> The Packers' Fertilizer Co., Cincinnati, O....	Claimed. Found.	2.00 2.40	..... 7.82	10.00 11.44	..... 12.36	..... 6.00	..... 1.87	1.00 1.83	..... 1.38	..... 476

477	Read's Alkaline Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	10.00 9.96	..... 10.76	1.50 2.05	..... .....	11.50 12.01	2.00 2.16	..... .....	12.88 13.01	..... 477
478	Peerless Pure Raw Bone. The Canton Fert. and Chem. Co., Canton, O...	Claimed. Found.	4.00 4.05	13.20 13.06	..... 14.10	..... 10.87	..... .....	22.00 23.93	..... .....	..... .....	27.78 33.17	..... 478
481	German Formula The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 1.00	10.00 10.56	..... 11.40	10.00 8.76	..... .....	..... 19.32	2.00 2.53	..... .....	21.54 19.66	..... 481
482	Chicago Fert. Co.'s Acid Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	12.00 11.51	..... 12.43	1.00 2.56	..... .....	..... 14.07	..... .....	..... .....	12.96 12.43	..... 482
483	Read's Gold Coln..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.00 2.00	8.00 6.52	8.00 8.57	1.50 1.66	..... 0.45	9.50 10.23	2.00 2.45	..... .....	17.65 18.78	..... 483
484	Read's Leader The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	8.00 3.91	8.00 8.95	1.50 1.08	..... 0.29	9.50 10.03	2.00 2.20	..... .....	14.39 16.16	..... 484
486	Wheeler's Unammoniated Wheat Grower. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	12.00 12.75	..... 13.77	1.50 2.02	..... .....	13.50 14.77	..... .....	..... .....	12.96 13.77	..... 486
487	Read's Acid Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	12.00 12.72	..... 13.74	1.50 1.79	..... .....	13.50 14.51	..... .....	..... .....	12.96 13.74	..... 487
488	Quinnipiac's Dissolved Phosphate and Potash. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	10.00 10.03	..... 10.83	1.50 1.98	..... .....	11.50 12.01	2.00 2.18	..... .....	12.88 13.10	..... 488
489	Read's Farmers' Friend. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.00 2.10	8.00 6.85	8.00 8.44	1.50 1.79	..... 0.48	9.50 10.23	5.00 4.80	..... .....	20.77 21.44	..... 489
490	Great Eastern's English Wheat Grower. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.15	8.00 3.75	8.00 8.57	1.50 1.46	..... 0.39	9.50 10.03	2.00 2.26	..... .....	14.39 15.75	..... 490
491	Pacific's Dissolved Phos. of Lime. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	14.00 15.55	..... 16.79	1.50 1.34	..... .....	15.50 16.89	..... .....	..... .....	15.12 16.79	..... 491
493	Potato and Truck Special. The Marietta Bone & Phos. Co., Marietta, O...	Claimed. Found.	2.50 2.20	8.00 7.17	8.00 8.06	..... .....	..... .....	10.00 10.23	6.00 6.17	..... .....	23.03 22.88	..... 493

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.		
			Percent.	Value.	Available.	Insoluble		Percent.	Value.	Total Percent.			Percent.	Value.
						Percent.	Value.							
494	Buckeye .....	Claimed.	1.50	.....	8.00	.....	.....	.....	10.00	3.00	.....	16.65	.....	
	The Marietta Bone & Phos. Co., Marietta, O..	Found.	0.90	2.93	7.92	8.55	0.90	.....	8.82	4.76	4.95	16.43	494	
495	Corn, Oats and Wheat Grower.....	Claimed.	1.00	.....	9.00	.....	.....	.....	11.00	1.00	.....	14.02	.....	
	The Marietta Bone & Phos. Co., Marietta, O..	Found.	0.65	2.12	8.98	9.70	1.63	0.44	10.61	1.68	1.75	14.01	495	
497	Special Vegetable Grower.....	Claimed.	1.50	.....	9.00	.....	1.00	.....	10.00	5.00	.....	20.08	.....	
	Muskingum Valley Fert. Co., Marietta, O.....	Found.	1.60	5.22	11.08	11.97	0.96	.....	12.04	5.59	5.81	23.00	497	
498	Swift's Pure Dissolved Animal Bone and Potash.	Claimed.	1.00	.....	18.00	.....	2.00	.....	20.00	4.00	.....	27.94	.....	
	Swift & Company, Chicago, Ill.....	Found.	1.60	5.22	15.93	17.20	13.58	1.93	19.51	3.50	3.64	27.99	498	
499	Swift's Pure Ammoniated Bone and Potash.....	Claimed.	5.75	.....	.....	.....	.....	.....	16.00	3.00	.....	32.59	.....	
	Swift & Company, Chicago, Ill.....	Found.	5.75	18.75	8.18	8.83	16.91	3.73	15.09	4.01	4.17	35.48	499	
502	Calumet Brand Special Pure Bone Meal.....	Claimed.	1.00	.....	.....	.....	.....	.....	29.77	.....	.....	23.21	.....	
	Hirsh, Stein & Co., Chicago, Ill.....	Found.	0.60	1.96	13.95	15.07	11.77	6.36	25.72	.....	.....	23.39	502	
503	Great Eastern's Wheat Special.....	Claimed.	2.00	.....	8.00	.....	1.50	.....	9.50	2.00	.....	17.65	.....	
	The Amer. Agri. Chem. Co., Cleveland, O.....	Found.	2.20	7.17	8.12	8.77	1.79	0.48	9.91	2.08	2.18	18.58	503	
504	Acidulated Phosphate .....	Claimed.	.....	.....	12.00	.....	1.00	.....	.....	.....	.....	12.96	.....	
	The Packers' Fertilizer Co., Cincinnati, O.....	Found.	.....	.....	12.60	13.61	3.96	.....	16.56	.....	.....	13.61	504	
505	Pioneer High Grade Phosphate and Potash.....	Claimed.	.....	.....	10.00	.....	1.00	.....	11.00	4.00	.....	14.96	.....	
	Pioneer Fertilizer Co., Chicago, Ill.....	Found.	.....	.....	11.83	12.78	1.02	.....	12.85	2.57	2.67	15.45	505	

506	Pioneer Truck and Corn Grower..... Pioneer Fertilizer Co., Chicago, Ill.....	Claimed. Found.	1.00 1.18	3.85 3.85	9.00 8.57	1.00 9.26	1.00 1.59	10.00 11.51	4.00 4.28	5.22 18.13	19.92 506
508	Milsom's Erie King..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	1.00 1.20	3.91 3.91	9.00 9.60	1.50 10.37	1.50 0.59	10.50 11.77	1.00 1.45	14.43 16.38	508
509	Milsom's Buffalo Fertilizer..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.50 2.65	8.64 8.64	8.00 8.38	1.50 9.05	1.50 0.43	9.50 9.97	1.50 1.85	18.76 20.04	509
510	E. Frank Coe's Western New Yorker..... The Coe-Mortimer Co., New York, N. Y.....	Claimed. Found.	1.00 1.00	3.26 3.26	8.00 7.04	1.00 7.60	1.00 1.40	8.44 8.44	4.00 4.92	16.33 15.98	510
511	Wheat, Corn and Oats Special..... The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	2.00 1.85	6.03 6.03	8.00 7.83	1.98 8.46	1.98 1.98	8.00 9.81	2.00 2.49	17.24 17.08	511
512	Bone and Potash Fertilizer..... The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	2.00 2.10	6.85 6.85	8.90 8.90	9.61 10.80	2.92 10.80	15.00 19.70	2.00 2.04	18.65 21.50	512
513	Ground Bone..... S. M. Hess & Bro., Philadelphia, Pa.....	Claimed. Found.	3.00 3.25	10.60 10.60	9.34 9.34	10.09 10.29	5.56 19.63	20.00 19.63	..... .....	23.18 26.25	513
514	Peerless Phosphate..... S. M. Hess & Bro., Philadelphia, Pa.....	Claimed. Found.	..... .....	..... .....	12.00 11.01	..... 11.89	1.50 3.19	13.50 14.20	5.00 4.43	18.16 16.50	514
517	Defiance Meat and Bone Fertilizer..... John Ruehle, Defiance, O.....	Claimed. Found.	2.00 1.40	4.56 4.56	6.00 2.15	2.32 11.96	2.00 1.06	8.00 4.10	4.00 3.45	18.24 11.52	517
518	Ohio Farmer Phosphate..... Western Union Chemical Co., Cleveland, O.....	Claimed. Found.	1.00 1.25	..... 4.08	9.00 9.33	..... 10.08	1.50 2.06	10.50 11.38	1.00 1.52	14.43 16.29	518
519	Perfection Crop-Maker and Potash..... Mace & Mansfield, Greenville, O.....	Claimed. Found.	..... .....	..... .....	11.00 11.84	..... 12.79	1.50 1.85	12.50 13.69	2.00 1.47	13.96 14.32	519
520	Big Crop-Maker and Potash..... Mace & Mansfield, Greenville, O.....	Claimed. Found.	..... .....	..... .....	10.00 9.08	..... 9.81	1.50 2.62	11.50 11.70	3.00 2.95	13.92 12.88	520
521	Mace's Prizetaker Tobacco and Potato Special..... Mace & Mansfield, Greenville, O.....	Claimed. Found.	1.00 1.10	..... 3.59	8.00 8.06	..... 8.70	1.50 1.40	9.50 9.46	4.00 3.98	16.47 16.81	521

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia				Phosphoric Acid				Potash (When Included.)		Record Number.
			Percent.	Value.	Percent.	Value.	Available.	Insoluble.	Total Percent.	Percent.	Value.	Total value.	
522	Vegetable Manure American Reduction Co., Pittsburg, Pa.	Claimed. Found.	3.00 2.80	..... 9.13	6.00 6.66	..... 7.19	..... 7.19	1.00 0.64	..... 0.17	7.00 7.30	6.00 6.67	..... 6.94	522
523	High Grade Super Phosphate of Bone. D. Blocher & Co., Gettysburg, Pa.	Claimed. Found.	1.50 1.13	..... 3.68	9.00 10.09	..... 10.90	..... 10.90	2.00 1.95	..... .....	11.00 12.04	2.00 3.24	..... 3.37	523
528	Ohio Farmers' Tobacco Grower. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	1.00 0.90	..... 2.93	8.00 8.51	..... 9.19	..... 9.19	1.00 1.46	..... 0.39	..... 9.97	4.00 3.95	..... 4.11	528
529	Ohio Farmers' Superior Phosphate. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	12.00 11.64	..... 12.57	..... 12.57	1.00 2.87	..... .....	..... 14.51	..... .....	..... .....	529
530	Buckeye Superphosphate The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	..... .....	..... .....	12.00 12.83	..... 13.86	..... 13.86	1.00 1.08	..... .....	..... 13.91	..... .....	..... .....	530
531	Park and Lawn Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	4.00 3.70	..... 12.06	8.00 8.33	..... 9.00	..... 9.00	1.50 1.76	..... 0.48	9.50 10.09	7.00 6.53	..... 6.79	531
533	Prize Potato and Vegetable Grower. The Youngstown Fertilizer Co., Youngstown, O.	Claimed. Found.	2.00 2.05	..... 6.68	7.00 10.55	..... 11.39	..... 11.39	1.00 3.90	..... 1.05	..... 14.45	10.00 9.83	..... 10.22	533
534	Pioneer Potato and Vegetable Grower. Pioneer Fertilizer Co., Chicago, Ill.	Claimed. Found.	2.00 1.80	..... 5.87	9.00 7.99	..... 8.63	..... 8.63	2.00 3.71	..... 2.00	11.00 11.70	7.00 *7.61	..... 9.28	534
535	Martin's Special Potato Manure. D. B. Martin Co., Philadelphia, Pa.	Claimed. Found.	1.00 1.10	..... 3.59	8.00 7.38	..... 7.97	..... 7.97	..... 1.28	..... 0.35	..... 8.66	5.00 5.80	..... 6.03	535

536	Iron City .....	Claimed.	2.00	.....	8.00	.....	1.00	.....	9.00	2.00	.....	17.24	.....
	American Reduction Co., Pittsburg, Pa.....	Found.	2.00	6.52	8.02	8.66	1.95	0.53	9.97	2.39	2.49	18.20	536
537	Hardy's Dearborn Phosphate.....	Claimed.	.....	.....	12.00	.....	1.00	.....	.....	.....	.....	12.96	.....
	The Smith Agri. Chem. Co., Columbus, O.....	Found.	.....	.....	11.13	12.02	2.68	.....	13.81	.....	.....	12.02	537
538	Michigan Carbon Work's Red Line Complete Manure .....	Claimed.	1.00	.....	9.00	.....	1.50	.....	10.50	1.00	.....	14.43	.....
	The Amer. Agri. Chem. Co., Cleveland, O.....	Found.	1.45	4.73	8.57	9.26	1.79	0.48	10.36	1.81	1.88	16.35	538
539	Phosphate and Potash.....	Claimed.	.....	.....	10.00	.....	1.00	.....	.....	4.00	.....	14.96	.....
	The Youngstown Fertilizer Co., Youngstown, O.....	Found.	.....	.....	12.18	13.15	0.64	.....	12.82	3.61	3.75	16.90	539
540	Martin's Dissolved Organic Compound.....	Claimed.	1.25	.....	9.00	.....	.....	.....	.....	2.00	.....	15.88	.....
	D. B. Martin Co., Philadelphia, Pa.....	Found.	1.25	4.08	8.12	8.77	1.66	0.45	9.78	2.82	2.93	16.23	540
541	Williams and Clark's Americus Prolific Crop Producer .....	Claimed.	1.00	.....	9.00	.....	1.50	.....	10.50	1.00	.....	14.43	.....
	The Amer. Agri. Chem. Co., Cleveland, O.....	Found.	1.10	3.59	9.72	10.50	2.11	0.57	11.83	1.50	1.56	16.22	541
542	Buckeye State Crop Grower.....	Claimed.	2.00	.....	8.00	.....	1.00	.....	.....	2.00	.....	17.51	.....
	The Youngstown Fertilizer Co., Youngstown, O.....	Found.	2.60	8.48	10.68	11.53	4.35	1.17	15.03	2.75	2.86	24.04	542
550	Wizard Brand Concentrated Plant Food.....	Claimed.	3.65	.....	6.06	.....	.....	.....	.....	1.35	.....	20.09	.....
	The Pulverized Manure Co., Chicago, Ill.....	Found.	3.50	11.41	5.31	5.73	11.53	0.83	6.84	1.31	1.60	19.57	550
554	Rickard's Dissolved Phosphate.....	Claimed.	.....	.....	14.00	.....	.....	.....	.....	.....	.....	15.12	.....
	The Smith Agri. Chem. Co., Columbus, O.....	Found.	.....	.....	15.07	16.28	1.05	.....	16.12	.....	.....	16.28	554
557	Calumet Brand Ammoniated Dissolved Pure Bone and Potash.....	Claimed.	2.00	.....	10.00	.....	1.00	.....	11.00	2.00	.....	19.94	.....
	Hirsh, Stein & Co., Chicago, Ill.....	Found.	2.20	7.17	10.80	11.66	1.31	0.35	12.11	2.79	2.90	22.08	557
558	Swift's Pure Dissolved Animal Bone.....	Claimed.	0.75	.....	20.00	.....	2.00	.....	22.00	.....	.....	25.13	.....
	Swift & Company, Chicago, Ill.....	Found.	2.20	7.17	16.18	17.47	15.44	2.94	21.62	.....	.....	27.58	558
559	Walker's Excelsior Brand.....	Claimed.	7.00	.....	12.00	.....	.....	.....	.....	11.00	.....	49.20	.....
	Flower City Plant Food Co., Rochester, N. Y....	Found.	7.00	22.82	5.06	5.45	6.14	1.66	11.19	14.99	18.29	48.23	559

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total value.	Record Number.
			Percent.	Value.	Percent.	Available.	Insoluble.	Total Percent.	Percent.	Value.		
560	Acme The F. C. Stedman Co., Athens, O.....	Claimed. Found.	7.80 7.65	..... 24.94	5.60 6.59	..... 7.12	8.60 +6.84	14.20 13.43	0.48 0.62	..... 0.64	36.62 36.39	560
561	Complete Fertilizer Chas. Herrmann, Scioto, O.....	Claimed. Found.	3.00 3.15	..... 10.27	9.00 10.46	..... 11.30	7.00 5.69	16.00 16.15	4.00 4.66	..... 4.85	23.66 27.96	561
562	Pure Bone with Potash Pittsburg Provision and Packing Co., Pittsburg, Pa. ....	Claimed. Found.	3.00 2.70	..... 8.80	12.00 9.59	..... 10.36	2.00 6.27	14.00 15.86	3.00 *4.85	..... 5.92	27.48 26.77	562
563	Globe Wheat and Corn Special Globe Fertilizer Co., Louisville, Ky.....	Claimed. Found.	0.50 1.28	..... 4.17	12.00 12.40	..... 13.39	..... 0.77	..... 13.17	.....	.....	14.59 17.56	563
564	High Grade Acid Phosphate The Roberts Fertilizer Co., Pittsburg, Pa.....	Claimed. Found.	.....	.....	16.00 17.97	..... 19.41	..... 0.26	..... 18.23	.....	.....	17.28 19.41	564
565	Ox Potash Mixture Tennessee Chemical Co., Nashville, Tenn.....	Claimed. Found.	.....	.....	10.00 10.64	..... 11.49	..... 1.22	..... 11.86	2.00 *2.01	..... 2.45	13.24 13.94	565
567	Corn and Wheat Grower El. Rauh & Sons Fert. Co., Indianapolis, Ind..	Claimed. Found.	1.00 1.25	..... 4.08	8.00 9.01	..... 9.73	..... 3.39	..... 12.40	2.00 3.39	..... 3.53	13.98 18.26	567
568	Tankage The Coshocton Provision Co., Coshocton, O.....	Claimed. Found.	7.50 8.53	..... 27.81	7.41 5.68	..... 6.13	4.16 +3.33	11.57 9.01	0.56 0.56	..... 0.58	35.28 36.32	568



569	Fox Wheat and Corn Special. Fox Chemical Co., Louisville, Ky.....	Claimed. Found.	0.50 0.50	1.63 14.17	12.00 15.30	..... 0.77	..... 14.94	..... 2.00	..... 0.50	14.59 16.93	..... 569
570	Fox Potash Special. Fox Chemical Co., Louisville, Ky.....	Claimed. Found.	..... .....	10.00 13.27	..... 14.33	..... 0.67	..... 13.94	2.00 *0.41	..... 0.50	13.24 14.83	..... 570
571	Quinnipiac's Soluble Dissolved Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	14.00 16.06	..... 17.34	1.50 1.72	..... 17.78	..... .....	..... .....	15.12 17.34	..... 571
572	Clover Leaf Special Wheat Grower. The Canton Lime & Fertilizer Co., Canton, O..	Claimed. Found.	1.00 1.23	..... 4.01	6.00 4.09	..... 4.42	..... 0.60	..... 0.48	4.00 3.95	..... 4.11	..... 572
573	Martin's Pure Bone and Potash Compound. D. B. Martin Co., Philadelphia, Pa.....	Claimed. Found.	2.00 1.70	..... 5.54	..... 8.21	..... 8.87	..... 12.07	..... 6.52	2.50 2.57	..... 2.67	..... 573
574	Dissolved Phosphate I. P. Thomas & Son Co., Philadelphia, Pa.....	Claimed. Found.	..... .....	12.00 15.05	..... 16.25	..... 0.74	..... 15.79	..... .....	..... .....	12.96 16.25	..... 574
575	Bowker's Ammoniated Food for Flowers. Bowker Fertilizer Co., New York, N. Y.....	Claimed. Found.	2.43 3.20	..... 10.43	4.00 6.90	..... 7.45	..... 5.56	..... 1.50	2.00 *3.55	..... 4.33	..... 575
576	Packers' Union Wheat, Oats and Clover Fer- tilizer The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	10.00 11.00	..... 11.88	1.50 2.05	..... .....	..... .....	2.00 2.16	..... 2.25	..... 576
577	Tip Top Superphosphate. Mace & Mansfield, Greenville, O.....	Claimed. Found.	..... .....	14.00 14.33	..... 15.48	1.50 2.81	..... .....	..... .....	..... .....	15.12 15.48	..... 577
579	Grain and Grass Fertilizer. International Seed Co., Rochester, N. Y.....	Claimed. Found.	1.50 1.85	..... 6.03	10.00 10.49	..... 11.33	1.50 1.28	..... .....	2.50 3.05	..... 3.17	..... 579
580	Electric Fertilizer International Seed Co., Rochester, N. Y.....	Claimed. Found.	1.00 1.25	..... 4.08	8.00 8.31	..... 8.97	1.50 2.05	..... .....	2.00 2.01	..... 2.09	..... 580
581	Leader Truck and Potato Manure. The Leader Buggy & Supply Co., Brooklyn, O..	Claimed. Found.	2.00 1.90	..... 6.19	8.00 6.87	..... 7.42	0.75 12.94	..... .....	5.00 *5.34	..... 6.51	..... 581

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Record Number.	
			Percent.	Value.	Available.		Insoluble.		Total Percent.	Percent.		Value.
					Percent.	Value.	Percent.	Value.				
582	Leader Standard The Leader Buggy & Supply Co., Brooklyn, O..	Claimed. Found.	2.00 1.90	..... 6.19	8.00 8.18	..... 8.83	..... 0.83	..... 11.25	2.00 2.20	..... 2.29	..... 17.44 18.14	582
585	Vegetable and Grain Grower. J. L. & H. Stadler Rend. & Fert. Co., Cleveland, O. ....	Claimed. Found.	1.00 1.90	..... 6.19	8.00 8.70	..... 9.40	..... 1.25	..... 11.35	2.00 2.64	..... 2.75	..... 14.32 18.34	585
587	Crescent Butchers Ground Bone..... Pittsburg Provision and Packing Co., Pitts- burg, Pa. ....	Claimed. Found.	3.00 3.85	..... 12.55	..... 8.32	..... 8.99	..... 4.52	..... 16.00	..... .....	..... .....	..... 20.50	.....
588	Pioneer General Crop Grower..... Pioneer Fertilizer Co., Chicago, Ill.....	Claimed. Found.	2.00 2.10	..... 6.85	9.00 7.60	..... 8.21	..... 4.60	..... 12.20	2.00 2.55	..... 2.65	..... 18.86 20.19	588
589	Pioneer Bone Meal..... Pioneer Fertilizer Co., Chicago, Ill.....	Claimed. Found.	3.00 3.20	..... 10.43	9.83 .....	..... 10.62	..... 7.35	..... 25.00	..... .....	..... .....	..... 26.53 28.40	589
590	Bone with Phosphate and Potash. The Queen City Fertilizer Co., Cincinnati, O...	Claimed. Found.	2.00 2.00	..... 6.52	10.00 10.36	..... 11.19	..... 5.04	..... 19.70	1.00 1.68	..... 1.75	..... 21.60 24.50	590
592	Acid Phosphate "High Grade" Nitrate Agencies Co., Chicago, Ill.....	Claimed. Found.	..... .....	..... 14.65	14.00 .....	..... 15.82	..... 1.98	..... 16.63	..... .....	..... .....	..... 15.12 16.82	592
594	Wizard Brand Pure Ground Bone..... The Pulverized Manure Co., Chicago, Ill.....	Claimed. Found.	3.00 2.95	..... 9.62	..... 9.54	..... 10.30	..... 8.18	..... 23.00	..... .....	..... .....	..... 25.19 28.10	594

595	Acid Phosphate S. M. Hess & Bro., Philadelphia, Pa.	Claimed. Found.	..... .....	..... .....	12.00 12.99	..... .....	1.50 2.68	..... .....	13.50 15.67	..... .....	..... .....	12.96 14.03	..... 595
596	High Grade Acid Phosphate S. M. Hess & Bro., Philadelphia, Pa.	Claimed. Found.	..... .....	..... .....	14.00 14.77	..... 15.95	1.50 2.05	..... .....	15.50 16.82	..... .....	..... .....	15.12 15.95	..... 596
598	Thomas' Triumph I. P. Thomas & Son Co., Philadelphia, Pa.	Claimed. Found.	1.00 1.45	..... 4.73	8.00 9.72	..... 10.50	..... 1.92	..... .....	9.00 11.64	2.00 2.69	..... .....	13.98 18.03	..... 598
600	Truck Special Roberts Fertilizer Co., Pittsburg, Pa.	Claimed. Found.	2.00 2.10	..... 6.85	..... .....	..... .....	..... .....	..... .....	..... .....	10.00 10.30	..... .....	16.92 17.56	..... 600
602	Piedmont High Grade Acid Phosphate Piedmont-Mt. Airy Guano Co., Baltimore, Md.	Claimed. Found.	..... .....	..... .....	14.00 16.18	..... 17.47	1.00 0.38	..... .....	15.00 16.56	..... .....	..... .....	15.12 17.47	..... 602
603	Piedmont Plow Brand Piedmont-Mt. Airy Guano Co., Baltimore, Md.	Claimed. Found.	2.00 2.30	..... 7.50	8.00 9.08	..... 9.81	1.00 1.66	..... .....	9.00 10.74	2.00 2.60	..... .....	17.51 20.46	..... 603
604	Keystone Fertilizer Pittsburg Provision and Packing Co., Pittsburg, Pa.	Claimed. Found.	1.75 2.35	..... 7.66	9.00 8.57	..... 9.26	2.00 1.85	..... .....	11.00 10.42	1.50 2.89	..... .....	17.53 20.43	..... 604
605	Pure Bone and Meat Pittsburg Provision and Packing Co., Pittsburg, Pa.	Claimed. Found.	6.00 6.60	..... 21.52	..... 5.88	..... 6.35	..... 13.64	..... .....	8.00 9.52	..... .....	..... .....	24.92 29.84	..... 605
606	Acid Phosphate Marietta Bone and Phosphate Co., Marietta, O.	Claimed. Found.	..... .....	..... .....	..... 14.30	..... 15.44	..... 0.03	..... .....	12.00 14.33	..... .....	..... .....	8.04 15.44	..... 606
607	Eagle Raw Bone Louisville Fertilizer Co., Louisville, Ky.	Claimed. Found.	3.00 4.20	..... 13.69	..... 6.21	..... 6.71	..... 12.40	..... .....	20.00 18.61	..... .....	..... .....	23.18 27.10	..... 607
608	Zell's T. & P. Superphosphate The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	..... .....	..... .....	14.00 15.09	..... 16.30	1.50 2.05	..... .....	15.50 17.14	..... .....	..... .....	15.12 16.30	..... 608

\* From sulphate.

† From animal matter.

TABLE I—MIXED FERTILIZERS—Concluded.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Available.		Insoluble		Percent.	Value.		
					Percent.	Value.	Percent.	Value.				
609	Fox Acid Phosphate Fox Chemical Co., Louisville, Ky.....	Claimed. Found.	..... .....	..... .....	14.00 15.79	..... 17.05	..... 0.90	..... 16.69	..... .....	..... .....	15.12 17.05	609
610	Standard Phosphate The M. Hamm Co., Washington, C. H., O.....	Claimed. Found.	..... .....	..... .....	14.00 17.65	..... 19.06	1.00 4.03	..... 21.68	..... .....	..... .....	15.12 19.06	610
611	Clover Leaf Wheat, Oats and Corn Grower. The Canton Lime & Fert. Co., Canton, O.....	Claimed. Found.	..... .....	..... .....	8.00 5.23	..... 5.65	0.80 4.92	..... 10.15	4.00 3.74	..... 3.89	12.80 9.54	611
612	Eagle Tobacco Grower. Louisville Fertilizer Co., Louisville, Ky.....	Claimed. Found.	3.00 1.75	..... 5.71	8.00 10.06	..... 10.86	..... 2.11	..... 12.17	6.00 4.65	..... 4.84	24.66 21.41	612

† From animal matter.

\* From sulphate.

Note—Fox Chemical Company and Globe Fertilizer Company of Louisville, Ky., are branches of the Federal Chemical Company, of Louisville, Ky.

TABLE II—BONES.

Record Number	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included)		Record Number
			Percent	Value	In Fine Bone		In Med. Bone		Percent	Value	
					Percent	Value	Percent	Value			
6	Bone Meal Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	3.50 3.85	12.55 13.72	19.05 4.04	13.72	4.04	2.18	22.00 23.09	26.15 28.45	6
7	Pure Ground Bone. The Jarecki Chemical Co., Sandusky and Cincinnati, O.	Claimed. Found.	3.00 2.80	9.13 13.95	19.37 3.69	13.95	3.69	1.99	20.00 23.06	23.18 25.07	7
28	Pioneer Chicago Bone Meal. Pioneer Fertilizer Co., Chicago, Ill.	Claimed. Found.	2.00 2.45	7.99 13.84	19.22 4.96	13.84	4.96	2.68	20.00 24.18	19.92 24.51	28
57	Bone Meal Geo. A. Bell, Wheelersburg, O.	Claimed. Found.	3.00 2.85	9.29 14.77	20.52 6.48	14.77	6.48	3.50	24.00 27.00	25.86 27.56	57
100	Bone Meal The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	2.00 1.65	5.38 12.92	5.00 5.98	12.92	5.98	3.23	23.93	18.22 21.53	100
144	Pure Raw Bone. The Alliance Fertilizer Co., Alliance, O.	Claimed. Found.	4.50 4.80	15.65 7.76	10.78 9.56	7.76	9.56	5.16	22.00 20.34	29.41 28.57	144
179	Swift's Pure Bone Meal. Swift & Company, Chicago, Ill.	Claimed. Found.	3.00 3.35	10.92 14.18	19.69 4.62	14.18	4.62	2.49	25.00 24.31	26.53 27.59	179
186	Lion Bone Meal. The Queen City Fertilizer Co., Cincinnati, O.	Claimed. Found.	3.00 3.15	10.27 13.62	18.92 3.09	13.62	3.09	1.67	20.00 22.01	23.18 25.56	186

TABLE II—BONES—Continued.

Record Number	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included)		Record Number
			Percent	Value	In Fine Bone		In Med. Bone		Percent	Value	
					Percent	Value	Percent	Value			
217	Big Two, Pure Bone Meal..... Morris & Company, Chicago, Ill.....	Claimed. Found.	2.50 2.65	8.64 20.95	15.08	6.62	3.57	28.00 27.57	..... .....	26.91 27.29	217
219	Big Six, Special Bone Meal..... Morris & Company, Chicago, Ill.....	Claimed. Found.	1.00 1.10	3.69 22.03	15.86	4.84	2.61	27.00 26.87	..... .....	21.35 22.06	219
221	Swift's Pure Raw Bone Meal..... Swift & Company, Chicago, Ill.....	Claimed. Found.	4.50 4.98	16.23 14.50	10.44	8.15	4.40	23.00 22.65	..... .....	30.08 31.07	221
247	Bone Meal (Steamed)..... L. Frank & Sons, Zanesville, O.....	Claimed. Found.	2.50 2.70	8.80 16.14	11.62	5.10	2.75	22.00 21.24	..... .....	22.89 23.17	247
275	Number One Bone Meal..... The Independent Packers' Fertilizer Co., Columbus, O.....	Claimed. Found.	1.00 0.85	..... 2.77	..... 28.10	..... 20.23	..... 5.35	..... 2.89	27.00 33.45	21.34 25.89	275
283	Pure Bone Meal..... L. Frank & Sons, Zanesville, O.....	Claimed. Found.	4.00 4.85	..... 15.81	..... 12.09	..... 8.70	..... 10.30	..... 5.56	21.00 22.39	27.11 30.07	283
309	Raw Bone Meal..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	4.50 4.85	..... 15.81	..... 21.58	..... 15.54	..... 3.81	..... 2.06	22.00 25.39	29.41 33.41	309
310	Bone Meal..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	3.00 4.00	..... 13.04	..... 20.71	..... 14.91	..... 3.95	..... 2.13	24.00 24.66	25.86 30.08	310
311	Steamed Bone Meal..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	2.00 2.60	..... 8.48	..... 17.24	..... 12.41	..... 4.31	..... 2.33	20.00 21.55	19.92 23.22	311

326	Tuscarora Fertilizer Co.'s Animal Bone..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	3.00	8.48	20.76	14.95	3.81	2.06	24.00	25.86	326
351	Stadler's Pure Raw Bone Meal..... J. L. & H. Stadler Rend. & Fert. Co., Cleve- land, O. ....	Claimed. Found.	4.50	.....	.....	.....	.....	.....	23.00	30.08	351
366	Pure Ground Bone..... Darling & Company, Chicago, Ill.....	Claimed. Found.	3.00	.....	.....	.....	.....	.....	23.00	25.19	366
372	Packers' Chicago Bone Meal..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	2.80	9.13	20.73	14.93	6.91	3.73	27.64	27.79	372
375	Big One—Ground Raw Bone..... Morris & Company, Chicago, Ill.....	Claimed. Found.	1.50	.....	.....	.....	.....	.....	25.00	21.64	375
399	Calumet Brand Pure Raw Bone Meal..... Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.50	4.89	19.04	13.71	9.17	4.95	28.21	23.55	399
451	Pure Raw Bone Meal..... Pittsburg Provision and Packing Co., Pitts- burg, Pa. ....	Claimed. Found.	4.00	.....	.....	.....	.....	.....	24.00	29.12	451
479	Tuscarora Fert Co., Raw Bone Meal..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	5.10	16.63	15.57	11.21	8.39	4.53	23.96	32.37	479
480	Calumet Brand Pure Bone Meal..... Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	4.50	.....	.....	.....	.....	.....	20.00	28.07	480
492	Pure Raw Bone..... The Marietta Bone and Phos. Co., Marietta, O.	Claimed. Found.	5.20	16.95	14.91	10.74	5.11	2.76	20.02	30.45	492
507	Superior Pure Raw Bone..... The Wulchet Fert. Co., Dayton, O.....	Claimed. Found.	4.50	.....	.....	.....	.....	.....	21.00	28.74	507
515	Raw Bone..... Ashland Fertilizer Co., Ashland, O.....	Claimed. Found.	4.85	15.81	14.80	10.66	4.68	2.53	19.48	29.00	515
516	Groves' Pure Raw Bone..... The Groves Company, Cincinnati, O.....	Claimed. Found.	4.50	.....	.....	.....	.....	.....	22.00	28.07	516

TABLE II—BONES—Concluded.

Record Number	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included)		Total Value	Record Number
			Percent	Value	In Fine Bone	In Med. Bone	Total Percent	Value	Percent	Value		
525	Hunt's Pure Ground Bone for Greenhouses. E. H. Hunt, Chicago, Ill.....	Claimed. Found.	3.00 1.80	5.87 25.38	18.27	5.20	23.00 30.58	2.81	.....	.....	25.19 26.95	525
543	Buncombe W. F. Holden, Ashtabula, O.....	Claimed. Found.	2.50 4.15	10.50 13.53	11.26	10.81	20.50 22.07	5.84	2.50 1.41	23.71 28.95	543	543
549	Bone Flour The Pulverized Manure Co., Chicago, Ill.....	Claimed. Found.	2.50 2.40	7.82 26.93	19.39	.....	23.00 26.93	.....	.....	23.56 27.21	549	549
551	Pure Bone Flour. Geo. S. Bartlett, Newport, Ky.....	Claimed. Found.	3.00 3.08	10.04 19.50	14.04	4.87	23.00 24.37	2.63	.....	25.19 26.71	551	551
553	Bone Meal Chas. Herrmann, Scioto, O.....	Claimed. Found.	4.00 5.80	18.91 15.08	10.86	7.95	23.00 23.03	4.29	.....	28.45 34.06	553	553
555	Kendel Pure Raw Bone Meal. A. C. Kendel, Cleveland, O.....	Claimed. Found.	4.50 4.75	15.49 21.38	15.39	3.63	22.00 25.01	1.96	.....	29.41 32.84	555	555
556	Bone Meal The Packers' Fertilizer Co., Cincinnati, O.....	Claimed. Found.	3.00 3.10	10.11 19.13	13.77	2.49	20.00 21.62	1.34	.....	23.18 25.22	556	556
566	Pure Bone and Potash Darling & Company, Chicago, Ill.....	Claimed. Found.	2.60 1.95	6.36 21.51	15.49	4.40	20.15 25.91	2.38	6.00 5.26	29.30 30.65	566	566
578	Swift's Pure Bone Meal and Blood. Swift & Company, Chicago, Ill.....	Claimed. Found.	4.50 4.50	14.67 15.63	11.25	6.38	23.00 22.01	3.45	.....	30.08 29.37	578	578



583	Pure Raw Bone.....	Claimed.	4.00	12.39	19.90	14.33	4.98	2.69	23.00	28.45	583
	Buffalo Fertilizer Co., Buffalo, N. Y.....	Found.	3.80						24.88	29.41	
584	Wood's Pure Lawn Bone Fertilizer.....	Claimed.	4.50						23.00	29.41	584
	Wood & Company, Cleveland, O.....	Found.	4.30	14.02	22.06	15.88	3.15	1.70	25.21	31.60	
586	Bone Meal.....	Claimed.	3.00						23.00	24.52	586
	The G. El. Howell Provision Co., Newark, O.....	Found.	4.40	14.34	8.73	6.29	13.66	7.38	22.39	28.01	
591	Peerless Bone Meal.....	Claimed.	2.75						22.00	23.71	591
	The Canton Fert. & Chem. Co., Canton, O.....	Found.	4.00	13.04	15.22	10.96	4.80	2.59	20.02	26.59	
593	Pure Raw Bone.....	Claimed.	4.50						21.00	28.74	593
	The Youngstown Fertilizer Co., Youngstown, O.....	Found.	4.70	15.32	11.24	8.09	10.58	5.71	21.82	29.12	
597	Ground Raw Bone.....	Claimed.	4.00						21.00	27.11	597
	Darling & Company, Chicago, Ill.....	Found.	4.65	15.16	12.92	9.30	11.45	6.18	24.37	30.64	
599	Swift's Pure Lawn Fertilizer.....	Claimed.	4.50						23.00	30.08	599
	Swift & Company, Chicago, Ill.....	Found.	5.20	16.95	10.60	7.63	13.77	7.44	24.37	32.02	
601	Raw Bone.....	Claimed.	4.50						20.00	28.07	601
	The Jarecki Chemical Co., Sandusky and Cincinnati, O.....	Found.	5.50	17.93	14.54	10.47	5.80	3.13	20.34	31.53	
614	Bone Meal.....	Claimed.	2.00						20.00	19.92	614
	The M. Hamm Co., Washington C. H., O.....	Found.	3.15	10.27	22.07	15.89	1.53	0.83	23.60	26.99	
615	Bone Meal.....	Claimed.	2.90						25.00	26.20	615
	The Individual Fert. Works, Columbus, O.....	Found.	2.80	9.13	21.11	15.20	7.42	4.01	28.53	28.34	

\* From sulphate.

TABLE III—FERTILIZING MATERIALS—UNMIXED.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia.		Phosphoric Acid.				Potash (When included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble Percent.	Value.	Percent.	Value.		
173	Swift's Ground Dried Blood. Swift & Company, Chicago, Ill.	Claimed. Found.	16.00 16.98	44.32	.....	.....	.....	.....	.....	.....	41.76 44.32	173
294	Muriate of Potash. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	.....	.....	.....	.....	.....	.....	48.00 32.88	28.93 28.93	42.24 28.93	294
295	Nitrate of Soda. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	19.00 19.05	49.72	.....	.....	.....	.....	.....	.....	49.59 49.72	295
317	Muriate of Potash. The Armour Fertilizer Works, Chicago, Ill.	Claimed. Found.	.....	.....	.....	.....	.....	.....	48.00 48.34	..... 42.54	42.24 42.54	317
381	Sulphate of Potash. Nitrate Agencies Co., Chicago, Ill.	Claimed. Found.	.....	.....	.....	.....	.....	.....	48.00 *47.32	46.37 46.37	47.04 46.37	381
382	Nitrate of Soda. Nitrate Agencies Co., Chicago, Ill.	Claimed. Found.	18.00 18.80	49.07	.....	.....	.....	.....	.....	.....	46.98 49.07	382
383	Muriate of Potash. Nitrate Agencies Co., Chicago, Ill.	Claimed. Found.	.....	.....	.....	.....	.....	.....	50.00 51.48	..... 45.30	44.00 45.30	383
390	Nitrate of Soda. The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	19.00 18.86	49.20	.....	.....	.....	.....	.....	.....	49.59 49.20	390
395	Nitrate of Soda. The Armour Fertilizer Works, Chicago, Ill.	Claimed. Found.	19.00 18.90	49.33	.....	.....	.....	.....	.....	.....	49.59 49.33	395

472	German Kainit ..... The Armour Fertilizer Works, Chicago, Ill.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	12.00	.....	10.56	....
473	Old Reliable Brand Genuine German Kainit..... James Bonday, Jr., & Co., Baltimore, Md.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	12.34	10.86	10.86	472
474	No. 1 Syndikat Sulphate of Potash..... James Bonday, Jr., & Co., Baltimore, Md.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	12.00	.....	10.56	....
475	No. 1 Syndikat Muriate of Potash..... James Bonday, Jr., & Co., Baltimore, Md.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	14.64	12.88	12.88	473
485	Muriate of Potash..... Swift & Company, Chicago, Ill.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	48.00	.....	47.04	....
496	Nitrate of Soda..... The Marietta Bone and Phos. Co., Marietta, O.	Claimed. Found.	.....	.....	.....	.....	.....	.....	*48.80	47.82	47.82	474
500	Sulphate of Potash..... Swift & Company, Chicago, Ill.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	49.00	.....	48.12	....
501	Nitrate of Soda..... Swift & Company, Chicago, Ill.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	51.24	46.09	46.09	475
524	Blood ..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	45.00	.....	39.60	....
526	Nitrate of Soda..... The Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	45.34	39.90	39.90	485
527	Muriate of Potash..... The Buffalo Fertilizer Co., Buffalo, N. Y.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	.....	.....	49.59	....
532	Swift's Screened Hard Wood Ashes..... Swift & Company, Chicago, Ill.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	.....	.....	49.46	501
544	Sulphate of Potash..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	.....	.....	.....	.....	.....	.....	.....	.....	31.32	....
			.....	.....	.....	.....	.....	.....	.....	.....	41.76	524
			.....	.....	.....	.....	.....	.....	.....	.....	47.76	....
			.....	.....	.....	.....	.....	.....	.....	.....	47.37	526
			.....	.....	.....	.....	.....	.....	48.00	.....	42.24	....
			.....	.....	.....	.....	.....	.....	53.00	46.64	46.64	527
			.....	.....	.....	.....	.....	.....	6.00	.....	5.28	....
			.....	.....	.....	.....	.....	.....	5.78	5.09	5.09	532
			.....	.....	.....	.....	.....	.....	48.00	.....	47.04	....
			.....	.....	.....	.....	.....	.....	*48.80	47.82	47.82	544

\* From sulphate.

TABLE III—FERTILIZING MATERIALS—UNMIXED—Concluded.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia.		Phosphoric Acid.				Potash (When included.)		Total Value.	Record Number.
			Percent.	Value.	Available.		Insoluble.		Percent.	Value.		
					Percent.	Value.	Percent.	Value.				
545	Muriate of Potash..... The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	43.12 46.08	545
546	Tuscarora Fert. Co.'s Muriate of Potash..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	42.24 46.68	546
547	Tuscarora Fert. Co.'s Nitrate of Soda..... The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	19.00 19.25	50.24	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	49.59 50.24	547
548	Nitrate of Soda..... The Jarecki Chemical Co., Cincinnati, O.....	Claimed. Found.	18.00 18.70	48.81	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	46.98 48.81	548
552	Nitrate of Soda..... The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	19.00 19.00	49.59	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	49.59 49.59	552
613	Mt. Pleasant Untreated Phosphate..... Mt. Pleasant Fert. Co., Mt. Pleasant, Tenn.....	Claimed. Found.	..... .....	..... .....	..... .....	..... .....	28.00 31.66	28.00 31.66	..... .....	..... .....	8.68 9.81	613
616	Muriate of Potash..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	43.12 48.51	616

DUPLICATES.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia.		Phosphoric Acid.				Potash. (When In- cluded.)		Record Number.
			Percent.	Value.	Percent.	Value.	Insoluble	Total Percent.	Percent.	Value.	
D9	Peerless Superphosphate The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	2.00 2.00	..... 6.52	8.00 8.06	..... 8.70	1.50 2.81	9.50 10.87	2.00 2.28	..... 2.37	..... D9
D22	Peerless Ohio Grain and Truck Grower..... The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	1.00 1.05	..... 3.42	8.00 7.93	..... 8.56	1.50 1.31	9.50 9.24	4.00 4.09	..... 4.25	..... D22
D124	Swift's Pure Bone Meal and Potash..... Swift & Company, Chicago, Ill.....	Claimed. Found.	3.00 3.05	..... 9.94	..... 9.55	..... 10.31	..... 12.52	23.50 22.07	3.00 3.14	..... 3.27	..... D124
D294	Muriate of Potash..... The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	48.00 50.64	..... 44.56	..... D294
D335	Peerless Onion and Celery Grower..... The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	2.00 2.00	..... 6.52	8.00 8.12	..... 8.77	1.50 1.66	9.50 9.78	10.00 9.77	..... 10.16	..... D335
D337	Peerless Vegetable Grower..... The Canton Fert. & Chem. Co., Canton, O.....	Claimed. Found.	1.50 1.50	..... 4.89	8.00 8.00	..... 8.64	1.50 1.72	9.50 9.72	7.00 7.36	..... 7.65	..... D337
D385	Farmers' Friend Phosphate..... The Alliance Fertilizer Co., Alliance, O.....	Claimed. Found.	..... .....	..... .....	14.00 13.11	..... 14.16	1.00 1.02	15.00 14.13	..... .....	..... 14.16	..... D385

NOTE—This list is published at the request of the manufacturers who were not satisfied with the first analysis of their brand. The result of the first analysis of each of these brands may be found by referring back to the same number in the regular report by which these brands are numbered. These duplicate samples were collected by regular inspectors of this department, and in no case were they furnished by the manufacturer. In each of these cases the manufacturer paid the cost of duplicate analysis. In reading the results of this second analysis reference should also be had to the first, which may be found in the regular list of this report by referring to the corresponding number.

**DANGER!****STOP—LOOK—LISTEN**

These brands show a deficiency of over six per cent. in the total money value as claimed by manufacturer. The law permits a margin of six per cent. in money value.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia		Phosphoric Acid				Potash (When Included.)		Total Value	Record Number.
			Percent	Value	Percent	Value	Insoluble	Total Percent	Percent	Value		
12	Hardy's Tobacco and Potato Special. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	2.00 1.25	4.08	8.00 8.98	9.70	1.00 1.95	10.93	4.00 2.93	19.59 3.05	17.36	12
37	Western Chemical Royal Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	.....	10.00 8.88	9.59	1.00 1.92	10.80	5.00 4.16	16.00 4.33	13.92	37
43	Chicago Fertilizer Co.'s Diamond Phosphate and Potash The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	.....	10.00 8.63	9.32	1.00 1.40	10.03	5.00 4.86	16.00 4.85	14.17	43
54	Calumet Brand Wheat, Corn and Oats Special. Hirsh, Stein & Co., Chicago, Ill.....	Claimed. Found.	1.00 1.00	3.26	8.00 5.85	6.32	1.00 10.48	9.00 6.33	4.00 4.09	16.60 4.25	14.09	54
71	Michigan Carbon's Special Potash Fertilizer. The Amer. Agri. Chem. Co., Cleveland, O.....	Claimed. Found.	..... .....	.....	10.00 9.34	10.09	1.50 2.46	11.50 11.80	5.00 4.47	16.00 4.85	14.74	71
96	Hardy's Acme Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	.....	10.00 8.31	8.97	1.00 1.34	9.65	5.00 4.84	16.00 5.03	14.00	96
101	Vegetable Formula The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	4.00 2.55	8.31	6.00 6.78	7.32	..... 1.15	7.93	7.00 7.28	26.80 7.57	23.51	101

		Claimed. Found.	2.00 1.45	4.73 8.31	8.00 8.97	1.00 0.83	0.22 9.14	9.00 16.76	2.00 1.95	2.03 15.95	17.51 122
122	Bash's Ideal Grain Grower. Bash Fertilizer Co., Ft. Wayne, Ind.	Claimed. Found.	2.00 1.45	4.73 8.31	8.00 8.97	1.00 0.83	0.22 9.14	9.00 16.76	2.00 1.95	2.03 15.95	17.51 122
128	Ground Bone The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	3.00 1.75	5.71 7.62	8.23 8.23	9.14 5.56	2.47 16.76	20.00 16.41	2.00 1.95	2.03 15.95	17.51 122
135	Cleveland Dryer's Horsehead Phosphate. The Amer. Agri. Chem. Co., Cleveland, O.	Claimed. Found.	12.00 10.30	11.12 11.12	1.50 5.56	13.50 15.86	12.96 11.12	135	2.00 1.95	2.03 15.95	17.51 122
207	Dissolved Phosphate and Potash. Western Union Chemical Co., Cleveland, O.	Claimed. Found.	10.00 9.15	9.88 9.88	1.50 2.49	11.50 11.64	5.00 4.95	207	2.00 1.95	2.03 15.95	17.51 122
216	Buckeye Champion Grain Grower. The Smith Agri. Chem. Co., Columbus, O.	Claimed. Found.	1.50 1.25	8.00 7.68	8.29 8.29	1.00 1.53	2.00 2.45	2.00 2.45	2.00 1.95	2.03 15.95	17.51 122
218	Big Four Morris & Company, Chicago, Ill.	Claimed. Found.	5.00 3.70	7.00 12.06	8.76 9.46	5.00 2.81	12.00 11.57	4.00 4.51	2.00 1.95	2.03 15.95	17.51 122
222	General Favorite Buffalo Fertilizer Co., Buffalo, N. Y.	Claimed. Found.	1.50 0.25	8.00 12.03	12.99 12.99	2.30 2.30	14.33 14.33	2.50 1.25	2.00 1.95	2.03 15.95	17.51 122
230	Swift's High Grade Phosphate and Potash. Swift & Company, Chicago, Ill.	Claimed. Found.	10.00 9.71	10.49 10.49	1.00 0.96	11.00 10.67	4.00 2.82	2.00 1.95	2.00 1.95	2.03 15.95	17.51 122
242	Phosphate and Potash. The G. E. Howell Provision Co., Newark, O.	Claimed. Found.	10.00 8.57	10.00 9.26	1.00 2.94	11.00 11.51	2.00 2.53	2.00 1.95	2.00 1.95	2.03 15.95	17.51 122
243	Corn and Oats Special. The G. E. Howell Provision Co., Newark, O.	Claimed. Found.	1.00 0.96	3.10 6.26	6.76 6.76	2.62 2.62	0.71 8.88	2.57 2.57	2.00 1.95	2.03 15.95	17.51 122
249	Buckeye Phosphate The Wulchet Fertilizer Co., Dayton, O.	Claimed. Found.	14.00 12.09	13.06 13.06	1.00 3.90	15.99 15.99	15.12 13.06	249	2.00 1.95	2.03 15.95	17.51 122
271	Acme Chief The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	2.00 1.80	8.00 5.87	8.02 8.66	1.82 1.82	9.84 9.84	8.00 7.23	2.00 1.95	2.03 15.95	17.51 122
272	Acme Special The New Process Fertilizer Co., Columbus, O.	Claimed. Found.	2.00 1.75	8.00 5.71	7.58 8.19	1.21 1.21	8.79 8.79	7.24 7.24	2.00 1.95	2.03 15.95	17.51 122

\* From sulphate.

† From animal matter.

## DANGER—STOP—LOOK—LISTEN—Continued.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia.		Phosphoric Acid.				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Available.	Insoluble.	Total Percent.	Percent.	Value.		
273	Animal Tankage and Potash. The G. E. Howell Provision Co., Newark, O....	Claimed. Found.	2.00 1.25	..... 4.08	8.00 6.52	..... 7.04	..... 0.57	10.00 8.63	2.00 2.99	..... 3.11	17.78 14.80	273
294	Muriate of Potash. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	48.00 32.88	..... .....	42.24 28.93	294
296	Chicago Fertilizer Co.'s B. B. and P. Brand. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.50 1.35	..... 4.40	8.00 7.23	..... 7.81	..... 1.34	..... 8.57	2.00 2.06	..... 2.14	15.88 14.35	296
320	Tusacora Fertilizer Co.'s Standard. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	2.00 1.65	..... 5.38	8.00 7.10	..... 7.67	0.75 1.85	..... 8.95	2.00 2.60	..... 2.70	17.44 16.25	320
323	Tuscarora Fertilizer Co.'s Acid Phosphate. The Armour Fertilizer Works, Chicago, Ill....	Claimed. Found.	..... .....	..... .....	14.00 12.31	..... 13.29	0.50 1.05	..... 13.36	..... .....	..... .....	15.12 13.29	323
330	Hardy's Imperial Phosphate. The Smith Agri. Chem. Co., Columbus, O.....	Claimed. Found.	1.00 0.90	..... 2.93	8.00 8.62	..... 9.31	1.00 1.53	..... 10.15	7.00 4.67	..... 4.86	19.45 17.51	330
335	Peerless Onion and Celery Grower. The Canton Fert. and Chem. Co., Canton, O....	Claimed. Found.	2.00 1.80	..... 5.87	8.00 7.57	..... 8.18	1.50 2.02	..... 9.50	10.00 9.77	..... 10.16	25.97 24.21	335
344	Ohio Grange Truck Grower. The G. E. Howell Provision Co., Newark, O.....	Claimed. Found.	3.00 2.40	..... 7.82	6.00 6.63	..... 7.16	2.00 3.46	..... 10.09	10.00 9.28	..... 9.65	27.20 25.56	344
345	Ohio Grange Corn, Wheat and Grass. The G. E. Howell Provision Co., Newark, O.....	Claimed. Found.	1.00 0.68	..... 2.22	8.00 7.11	..... 7.68	1.00 3.19	..... 10.30	4.00 3.45	..... 3.59	16.33 13.49	345



350	General Crop .....	Claimed.	2.00	.....	.....	.....	.....	.....	8.00	2.00	.....	13.96	....
	The Roberts Fertilizer Co., Pittsburg, Pa.....	Found.	1.85	6.03	0.32	0.35	8.37	.....	8.69	2.68	2.79	9.17	350
367	Thomas' Phosphate Powder.....	Claimed.	.....	.....	15.00	.....	2.00	.....	.....	.....	.....	16.20	....
	The Coe-Mortimer Co., New York, N. Y.....	Found.	.....	.....	6.75	7.29	9.72	.....	16.47	.....	.....	7.29	367
385	Farmers' Friend Phosphate.....	Claimed.	.....	.....	14.00	.....	1.00	.....	15.00	.....	.....	15.12	....
	The Alliance Fertilizer Co., Alliance, O.....	Found.	.....	.....	10.93	11.80	2.05	.....	12.98	.....	.....	11.80	385
D385	Farmers' Friend Phosphate.....	Claimed.	.....	.....	14.00	.....	1.00	.....	15.00	.....	.....	15.12	....
	The Alliance Fertilizer Co., Alliance, O.....	Found.	.....	.....	13.11	14.16	1.02	.....	14.13	.....	.....	14.16	D385
432	Peerless Dissolved Bone Phosphate with Potash. The Canton Fert. and Chem. Co., Canton, O...	Claimed.	.....	.....	10.00	.....	.....	.....	.....	2.00	.....	12.88	....
	.....	Found.	.....	.....	9.33	10.08	0.90	.....	10.23	1.79	1.86	11.94	432
442	Martin's Potash and Soluble Phosphate.....	Claimed.	.....	.....	12.00	.....	.....	.....	.....	5.00	.....	18.16	....
	D. B. Martin Co., Philadelphia, Pa.....	Found.	.....	.....	11.57	12.50	.....	.....	11.57	3.51	3.65	16.16	442
453	Guano Fertilizer .....	Claimed.	1.75	.....	9.00	.....	2.00	.....	11.00	.....	.....	15.97	....
	Pittsburg Provision and Packing Co., Pitts- burg, Pa. ....	Found.	2.20	7.17	6.78	7.32	1.85	0.50	8.63	.....	.....	14.99	453
481	German Formula .....	Claimed.	1.00	.....	10.00	.....	10.00	.....	.....	2.00	.....	21.54	....
	The Smith Agrl. Chem. Co., Columbus, O.....	Found.	1.00	3.26	10.56	11.40	8.76	2.37	19.32	2.53	2.63	19.66	481
514	Peerless Phosphate .....	Claimed.	.....	.....	12.00	.....	1.50	.....	13.50	5.00	.....	18.16	....
	S. M. Hess & Bro., Philadelphia, Pa.....	Found.	.....	.....	11.01	11.89	3.19	.....	14.20	4.43	4.61	16.50	514
517	Defiance Meat and Bone Fertilizer.....	Claimed.	2.00	.....	6.00	.....	2.00	.....	8.00	4.00	.....	18.24	....
	John Ruehle, Defiance, O.....	Found.	1.40	4.56	2.15	2.32	1.95	1.05	4.10	3.45	3.59	11.52	517
520	Big Crop Maker and Potash.....	Claimed.	.....	.....	10.00	.....	1.50	.....	11.50	3.00	.....	13.92	....
	Mace & Mansfield, Greenville, O.....	Found.	.....	.....	9.08	9.81	2.62	.....	11.70	2.95	3.07	12.88	520
537	Hardy's Dearborn Phosphate.....	Claimed.	.....	.....	12.00	.....	1.00	.....	.....	.....	.....	12.96	....
	The Smith Agrl. Chem. Co., Columbus, O.....	Found.	.....	.....	11.13	12.02	2.68	.....	13.81	.....	.....	12.02	537

\* From sulphate.

† From animal matter.

## DANGER—STOP—LOOK—LISTEN—Concluded.

Record Number.	Name of Fertilizer and Address of Manufacturer.	Claimed and Found.	Ammonia.				Phosphoric Acid.				Potash (When Included.)		Total Value.	Record Number.
			Percent.	Value.	Percent.	Value.	Available.	Insoluble.	Total Percent.	Percent.	Value.	Total Value.		
572	Clover Leaf Special Wheat Grower..... The Canton Lime & Fertilizer Co., Canton, O...	Claimed. Found.	1.00 1.23	..... 4.01	8.00 4.09	..... 4.42	..... 0.60	..... 1.79	8.60 5.88	4.00 3.95	..... 4.11	13.90 13.02	572	572
611	Clover Leaf Wheat, Oats and Corn Grower..... The Canton Lime & Fertilizer Co., Canton, O...	Claimed. Found.	..... .....	..... .....	8.00 5.23	..... 5.65	..... 0.80	..... 4.92	8.80 10.15	4.00 3.74	..... 3.89	12.80 9.54	611	611
612	Eagle Tobacco Grower..... Louisville Fertilizer Co., Louisville, Ky.....	Claimed. Found.	3.00 1.75	..... 5.71	8.00 10.06	..... 10.86	..... 2.11	..... 12.17	..... 12.17	6.00 4.65	..... 4.84	24.66 21.41	612	612

## LIST OF COMMERCIAL FERTILIZERS PROPERLY LICENSED

And offered for sale in Ohio in 1909, but samples of which were not found by the Secretary or Deputies on the markets, hence they have not been analyzed, and their valuations do not appear in this report.

## MANUFACTURERS' CLAIMS.

Address of Manufacturer and Name of Fertilizer.	Ammonia		Phosphoric Acid				Potash (When In- cluded.)
			Available		Insoluble		
			Total				
	Percent	Percent	Percent	Percent	Percent	Percent	
American Reduction Co. of Pittsburg, Pittsburg, Pa.—	1.50	7.00	1.00	8.00	4.00		
Century of Phosphate and Potash.....	3.00	.....	.....	23.00	.....		
Fine Ground Bone.....	2.80	.....	.....	2.25	0.70		
Tankage .....							
The American Agricultural Chemical Co., New York, N. Y.—	1.00	9.00	1.50	10.50	2.00		
Crocker's New Rival Ammo. Superphosphate.....	1.00	8.00	1.50	9.50	4.00		
Crocker's Complete Manure.....	1.00	9.00	1.50	10.50	1.00		
Crocker's General Crop Phosphate.....	.....	12.00	1.50	13.50	.....		
Pacific's Acid Phosphate.....	1.00	8.00	1.50	9.50	2.00		
Quinnipiac's Corn and Wheat Grower.....	.....	14.00	1.50	15.50	.....		
Zell's Dissolved Phosphate.....	2.00	8.00	1.50	9.50	2.00		
Zell's Ammoniated Superphosphate.....	.....	12.00	1.50	13.50	.....		
Zell's Dissolved S. C. Phosphate.....							
Buffalo Fertilizer Co., Buffalo, N. Y.—							
Sulphate of Potash.....					50.00		
Baugh & Sons Co., Philadelphia, Pa., and Norfolk, Va.—		14.00					
Baugh's High Grade Acid Phosphate.....							

## LIST OF COMMERCIAL FERTILIZERS PROPERLY LICENSED—Continued.

Address of Manufacturer and Name of Fertilizer.	Ammonia.	Phosphoric Acid.				Potash. (When In- cluded.)
		Available.		Insoluble.	Percent.	
		Percent.				
		Percent.	Percent.	Total.	Percent.	
The Coe-Mortimer Co., New York, N. Y.—	3.00	8.00	1.00	.....	6.00	
E. Frank Coe's Gold Brand Excelsior Guano.....	2.00	8.00	1.50	.....	3.00	
E. Frank Coe's Universal Fertilizer.....						
The Canton Lime and Fertilizer Co., Canton, O.—						
Clover Leaf Grain and Grass Grower.....	.....	10.00	1.00	11.00	2.00	
Clover Leaf High Grade Wheat, Oats and Corn Grower.....	1.00	8.00	0.80	8.80	2.00	
Clover Leaf Farm and Garden Fertilizer.....	1.50	6.50	0.65	7.15	4.00	
Clover Leaf Vegetable Grower.....	1.00	5.00	0.50	5.50	7.00	
Clover Leaf Celery and Onion Grower.....	2.00	5.00	0.50	5.50	8.00	
Federal Chemical Co., Louisville, Ky.—						
Daybreak Potash Special.....	.....	10.00	.....	.....	2.00	
Daybreak Grain Special.....	0.50	12.00	.....	.....	.....	
Daybreak Favorite.....	1.00	11.00	.....	.....	3.00	
Hirsh, Stein & Co., Chicago, Ill.—						
Calumet Fruit and Truck Grower.....	5.00	8.00	1.00	9.00	7.00	
S. M. Hess & Bro., Philadelphia, Pa.—						
Tobacco Manure.....	3.00	8.00	1.50	9.50	6.00	
The G. E. Howell Provision Co., Newark, O.—						
Ohio Grange Corn and Oats.....	1.00	8.00	1.00	9.00	2.00	
Ohio Grange Animal Tankage and Potash.....	2.00	8.00	1.00	9.00	2.00	

The Independent Packers' Fertilizer Co., Columbus, O.— No. 6 Ammoniated Phosphate with Potash.....	1.00	9.00	.....	.....	.....	1.00
The Leader Buggy and Supply Co., Brooklyn, O.— Leader Pure Bone Meal.....	3.00	.....	.....	.....	24.00	.....
Leader Grain and Grass Grower.....	1.00	9.00	.....	0.75	.....	1.00
Louisville Fertilizer Co., Louisville, Ky.— Eagle High Grade Dissolved Phosphate.....	.....	14.00	.....	.....	.....	.....
D. B. Martin Co., Philadelphia, Pa.— Martin's Prize Potato.....	2.00	8.00	.....	.....	.....	10.00
Martin's Potash and Soluble Phosphate.....	.....	10.00	.....	.....	.....	2.00
Martin's Acid Phosphate.....	.....	14.00	.....	.....	.....	.....
Pittsburg Provision and Packing Co., Pittsburg, Pa.— No. 1 Pure Raw Bone Meal.....	4.50	9.00	.....	.....	22.24	.....
Phosphate and Potash.....	.....	12.00	.....	1.00	10.00	2.00
Acid Phosphate.....	.....	.....	.....	1.00	13.00	.....
Pioneer Fertilizer Co., Chicago, Ill.— Kainit.....	.....	.....	.....	.....	.....	12.40
Muriate of Potash.....	.....	.....	.....	.....	.....	45.00
Sulphate of Potash.....	.....	.....	.....	.....	.....	48.00
Pioneer Bone Meal and Potash.....	2.40	.....	.....	.....	20.00	3.00
E. Rauh & Sons Fertilizer Co., Indianapolis, Ind.— Half and Half.....	1.50	8.00	.....	10.00	.....	.....
The Smith Agricultural Chemical Co., Columbus, O.— Abbott & Martin's Tennessee Phosphate.....	.....	12.00	.....	1.00	.....	.....
Dried Blood.....	16.00	.....	.....	.....	.....	.....
Sulphate of Potash.....	.....	.....	.....	.....	.....	50.00
The Edward Slover Fertilizer Co., Camden, O.— Fourteen.....	.....	14.00	.....	1.00	15.00	.....
Tennessee Chemical Co., Nashville, Tenn.— Ox High Grade Dissolved Phosphate.....	.....	14.00	.....	.....	.....	.....

## LIST OF COMMERCIAL FERTILIZERS PROPERLY LICENSED—Concluded.

Address of Manufacturer and Name of Fertilizer.	Ammonia.	Phosphoric Acid.			Potash. (When In- cluded.)
		Available.	Insoluble.	Total.	
	Percent.	Percent.	Percent.	Percent.	Percent.
	I. P. Thomas & Son Co., Philadelphia, Pa.— Grain and Grass Grower.....	.....	10.00	.....	11.00
Tuscarora Fertilizer Co., Chicago, Ill.— Phosphate and Potash.....	.....	10.00	0.50	.....	2.00

Note—License Certificate No. 11 was issued to Hammond's Slug Shot Works, Fishkill-on-Hudson, New York, for Hammond's Sward Food. This brand did not meet requirements of law. Said license was cancelled by this Department.

## Ohio Fertilizer Law

### AN ACT

To Regulate the Sale of Commercial Fertilizers and to Amend Sections 4446a, 4446b, 4446d, 4446f, 4446g, 4446h and 4446i of the Revised Statutes of Ohio and to Repeal Certain Sections Therein Named.

*Be it enacted by the General Assembly of the State of Ohio:*

SECTION 1. That sections 4446a, 4446b, 4446d, 4446e, 4446f, 4446g, 4446h, and 4446i of the Revised Statutes of Ohio be amended so as to read as follows:

SEC. 4446a. Every manufacturer of commercial fertilizers, and every person, firm or company, who shall sell, offer for sale, or expose for sale any commercial fertilizer in this state, shall affix to every package of such commercial fertilizers, in a conspicuous place on the outside thereof, a plainly printed certificate stating the number of net pounds contained in the package so sold or offered for sale, the name, brand, or trade-mark under which it is sold, the name of the manufacturer, the place of manufacture, and if the manufacturer controls or operates one or more branch or subsidiary companies, the name of the manufacturer and the name of the company for whom the goods were manufactured. Such certificate shall also contain a chemical analysis, stating the minimum percentages guaranteed of ammonia in an available form, of potash soluble in water, of phosphoric acid in an available form (the available comprising the soluble and reverted) and of the insoluble phosphoric acid, and the source of the insoluble phosphoric acid, whether animal or mineral. No other form of analysis shall be used and no duplication of the terms or any equivalents of the same in other terms (other than nitrogen or its equivalent in ammonia), or any figures of percentages higher than the lowest actually guaranteed shall be affixed to any package, or be printed upon the bags, or sample packages, or be used in any printed matter descriptive of the same; and no false or misleading name, brand or trade-mark shall be used in designating any commercial fertilizer or a name, brand or trade-mark indicating or denoting that the essential ingredients thereof were obtained from bone or animal substances, when in fact the source of the same was wholly or in part a mineral substance. For the purposes of this act any material that has been so heated as to destroy the organic matter shall be considered as a mineral substance.

No commercial fertilizer shall be sold or offered for sale when the percentage of essential ingredients is less than the following, to-wit: For a complete fertilizer, the sum of ammonia, available phosphoric acid and potash must total eleven per cent.; no complete fertilizer shall be offered for sale containing less than one per cent. ammonia; for a mixed fertilizer without ammonia, the sum of available phosphoric acid and potash must total twelve per cent.; no mixed fertilizer shall be offered for sale containing less than two per cent. potash; for an acid fertilizer, the available phosphoric acid must total twelve per cent.

SEC. 4446b. Before any commercial fertilizer is sold or offered for sale, the manufacturer, importer or party who caused it to be sold or offered for sale within the state of Ohio, shall file with the secretary of the Ohio State Board of Agriculture a certified copy of the certificate referred to in section 4446a.

SEC. 4446c. The manufacturer, importer or agent of any commercial fertilizer, shall pay, annually, on or before the first day of May, a license fee of twenty dollars *on each* brand, for the privilege of selling or offering for sale within the state, said fee to be paid to the secretary of the Ohio State Board of Agriculture; provided, that whenever the manufacturer or importer shall have paid the license fee herein required, for any person acting as agent for such manufacturer or importer, such agent shall not be required to pay the fee named in this section.

SEC. 4446d. All analysis of commercial fertilizers sold within the state shall be made by or under the direction of the secretary of the Ohio State Board of Agriculture, and paid for out of the fund arising from the license fees provided for in section 4446c. At least one analysis of each fertilizer sold shall be annually made, and any surplus arising from license permits shall be placed to the credit of the agricultural fund.

SEC. 4446e. The secretary of the Ohio State Board of Agriculture shall publish annually a correct report of all analyses made and certificates filed, together with the relative commercial value of each fertilizer computed from its analysis in such manner as he may determine; he shall also publish for comparison the analysis guaranteed by the manufacturer. Such publications shall contain a statement of moneys received on account of license fees and expended under this act.

SEC. 4446f. Any person or party who shall offer or expose for sale, or sell any commercial fertilizer without complying with the provisions of sections 4446a, 4446b and 4446c of the Revised Statutes, or shall permit an analysis to be attached to any package of such fertilizer, stating that it contains a larger percentage of any one or more of the constituents named in section 4446a than it really does contain, shall be fined not less than fifty nor more than two hundred dollars for a first offense, and for a second or subsequent offense shall be fined not less than two hundred nor more than five hundred dollars, or imprisoned not more than six months,



or both; provided that a deficiency of six per cent. or less in the total money value of the product as computed by the secretary of the State Board of Agriculture shall not be evidence of criminal intent.

SEC. 4446g. It shall be the duty of the attorney general or any prosecuting attorney to prosecute all violations of this act.

SEC. 4446h. The secretary of the Ohio State Board of Agriculture or any person by him deputed, is hereby empowered to select from any package of commercial fertilizer, exposed for sale in any county of Ohio, or in the possession of any dealer, consumer or transportation company, a quantity not exceeding two pounds, which quantity shall be for analysis to compare with the sample deposited with said secretary, as provided in section 4446b, and with the printed certificate found on the package so exposed for sale.

SEC. 4446i. To facilitate the inspection of fertilizers, the secretary of the Ohio State Board of Agriculture is authorized to require all manufacturers making shipments into or within the state to notify him of the kinds, amounts, dates, destinations and consignees of all such shipments. And any person not a dealer in, or agent for the sale of any fertilizer who may purchase any commercial fertilizer in this state for his own use and not for sale, may take a sample of same for analysis, which analysis shall be made by or under the direction of the secretary of the Ohio State Board of Agriculture. Such sample for analysis shall be taken by the purchaser in the presence of the person, company or agent selling the fertilizer, from at least ten (10) per cent. of the sacks or other packages comprising the whole lot purchased; provided, however, that if the number of sacks comprising the whole lot purchased be less than one hundred, then samples shall be taken from not less than ten sacks; and if the number of sacks comprising the whole lot purchased be less than ten, the samples shall be taken from each sack and all such samples shall be taken in the manner and as prescribed and required by the secretary of the Ohio State Board of Agriculture, and the samples shall in all cases be taken from dry and undamaged goods from packages or sacks that have not heretofore been opened, broken or resacked and said samples shall be taken at the time and place of delivery to the purchaser, and shall be thoroughly mixed and at least two pounds of the material after mixing must be put into two cans or jars, one of which, securely sealed and marked in such a way as to surely identify the sample and show by whom it was sent, without giving the name of the fertilizer or the person from whom it was purchased, and must be forwarded by express all charges prepaid to the secretary of the Ohio State Board of Agriculture, Columbus, Ohio, accompanied by a fee of three dollars, the other sample so securely sealed shall be turned over to the company or agent selling same. The purchaser shall also send with the sample a certificate signed by himself and two disinterested witnesses, stating that the sender has pur-

chased the fertilizer for his own use and not for sale, and that the sample was taken in the manner prescribed in this section. Provided, however, that if the person, company or agent shall refuse to witness the taking of sample, then the sample may be taken in the manner already described in the presence of two disinterested witnesses who shall certify to the manner of taking the sample. The purchaser shall preserve the printed certificate from one of the bags or other packages sampled to be sent to the secretary of the Ohio State Board of Agriculture after having received the report of analysis of the sample, and at the same time he shall furnish to the secretary of the Ohio State Board of Agriculture the name and address of the firm of whom the fertilizer was purchased and the amount purchased; and any person having sent a sample for analysis, under the provisions of this section, who shall, after having received the report of analysis of same, refuse to furnish the required information, shall thereafter forfeit the privilege of analysis of fertilizers, under this section. But if any sample shall have been submitted for analysis, without all the requirements of this section having been complied with, the secretary of the Ohio State Board of Agriculture shall inquire into the case and may accept the sample for analysis if he believes that it is a fair sample of the fertilizer as it was delivered to the purchaser. Provided, however, that no provisions of this act shall apply to any fertilizer purchased from the manufacturer by a retail dealer prior to October 15, 1908, provided that the amount of such fertilizer in the hands of such retail dealer does not exceed three tons.

SECTION 2. That sections 4446a, 4446b, 4446d, 4446e, 4446f, 4446g, 4446h, 4446i, and 7002 of the Revised Statutes of Ohio be and the same are hereby repealed and this act shall take effect and be in force from and after the first day of November, 1908.

# OFFICIAL REPORT

OF THE

Secretary of the Ohio State  
Board of Agriculture

ON

# Commercial Feed Stuffs

Licensed to be sold

During the Year 1909

**FINANCIAL STATEMENT OF COMMERCIAL FEED STUFFS  
INSPECTION ENDING DECEMBER 31, 1909.**

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**RECEIPTS.**

License fees received for 303 brands.....	\$7,575 00
Fees for special analyses.....	160 00
Amount paid into State Treasury.....	<u>\$7,735 00</u>

**DISBURSEMENTS.**

Amount paid H. A. Weber, Chemist, for analyses.....	\$2,328 00
Salary and expense of Inspector W. M. Brown.....	604 14
Salary and expense of Inspector T. L. Calvert.....	475 26
Expense of Inspector E. J. Filbin.....	13 00
Salary and expense of Inspector H. F. Fricke.....	215 02
Salary and expense of Inspector S. K. Johnson.....	82 42
Expense of Inspector R. H. Ramsdell.....	168 77
General expense, supplies, postage, etc.....	71 70
	<u>\$3,958 31</u>
Balance in State Treasury.....	3,776 69
	<u>\$7,735 00</u>

## IMPORTANT QUESTIONS RELATIVE TO THE USE OF COMMERCIAL FEED STUFFS.

BY H. A. WEBER, CHEMIST.

These questions to be asked and answered at Institute meetings and Grange Lodges:

1. What is a nutrient, and what are the nutrients contained in a feeding stuff?
2. What is a complete food?
3. What is a perfect food or ration?
4. What are concentrated feeding stuffs?
5. For what purpose are concentrated feeding stuffs employed in feeding?
6. What are coarse fodders or roughage?
7. For what purpose are coarse fodders employed in feeding?
8. What is the function of protein in a feeding stuff?
9. What is the function of fat in a feeding stuff?
10. What is the function of nitrogen-free extract or carbohydrates in a feeding stuff?
11. What is the function of the ash ingredients in natural food products?
12. What commercial feeding stuffs are deficient in ash ingredients?

## ANSWERS TO QUESTIONS.

BY H. A. WEBER, CHEMIST.

### Answer 1.

A nutrient is a single body or chemical compound, which takes an active part in the process of animal nutrition. The nutrients contained in a feeding stuff are:

1. *Nitrogenous* organic compounds, as the various albuminoids and amine bodies, known as protein.

2. *Non-nitrogenous* organic compounds, as starch, sugar, fiber pectose, gums, etc., known as carbohydrates.

3. *Non-nitrogenous* organic compounds, as the various animal and vegetable oils and fats.

4. *Inorganic* compounds or salts, as sodium chloride, potassium chloride, potassium phosphate, calcium phosphate, magnesium and iron compounds, etc., known as the ash ingredients, which form the residue after complete combustion or burning of the feeding stuff.

Single nutrient, even when fed in ample quantities, cannot support animal life. But not only this. If all the organic nutrients mentioned in groups 1, 2 and

3 are fed together and group 4 is wanting, animals will die of starvation as speedily as if receiving no food at all. The same may be said if groups 2, 3 and 4 are fed together and group 1 is omitted.

Answer 2.

A complete food is one which contains all of the four groups of nutrients mentioned above. The natural feeding stuffs and many of their by-products are complete foods. Among these may be cited the cereals, corn, oats, wheat, rye, barley, etc.; the legumes, beans, peas, vetches, lentils, etc.; green fodders, pasture grass, hay, corn, stover, straw, bran, linseed meal, cotton seed meal, tubers, roots and many others.

Answer 3.

The natural feeding stuffs, as well as the commercial by-products, taken separately, rarely if ever contain the various nutrients in the proper proportions to answer the purpose for which animals are fed. It has been shown by experiment that, for maintenance, for growth, and for the production of force, fat, flesh, milk and wool, certain proportions of the organic nutrients are the best and most economical. Special attention must be called here to the fact that the total amount of the nutrients of a feeding stuff, as determined by chemical analysis, is no criterion of its food value. The true food value of a feeding stuff depends upon the amount of the various nutrients which are digested. In general, it may be stated that the lower the contents of fiber the higher the digestibility of the nutrients, and conversely the higher the content of fiber the lower the digestibility of the nutrients in a given feeding stuff. Hence the protein, fat and carbohydrates of such feeding stuffs as the cereals, bran, cotton seed and linseed meals and the like are much more largely digested than those of hay, straw, stover, chaff and hulls. From these considerations it is evident that in giving the proper proportions and amounts of nutrients for the various purposes for which animals are fed, only the digestible portion of the nutrients can be considered. The amounts of digestible nutrients best adapted for the various purposes of feeding farm animals, as determined by feeding experiments, are called *feeding standards*, and a mixture of feeding stuffs containing these prescribed amounts is a perfect food or ration.

Answer 4.

Concentrated feeding stuffs are such which usually have a low content of fiber and a high content of digestible nutrients. They are articles of commerce and are embraced in the term commercial feeding stuffs. Some are rich in carbohydrates like the cereals; others are rich in protein like the legumes, cotton seed meal, linseed meal, malt sprouts, brewers' and distillers' grains, etc. Meat meal is rich in fat and protein. The same may be said of cotton seed meal and old process linseed meal.

Answer 5.

The concentrated feeding stuffs are employed in feeding for the purpose of making balanced rations. By their judicious admixture to inferior feeding stuffs rations can be prepared which comply with the standards established for various purposes. Thus the feeder is enabled to utilize the inferior feeding stuffs which may be in his possession and which he could not profitably feed alone. Attention should be called here to numerous commercial feeding stuffs found upon the mar-

kets, which contain large amounts of waste products, like oat hulls, corn-cobs and rice hulls, etc. These waste products have little or no food value. The mixtures are high in fiber and low in digestible nutrients and cannot, therefore, be employed in preparing a balanced ration.

Answer 6.

Coarse fodders, or roughage, consist of the bulky feeding stuffs produced upon the farm, as grass, silage, hay, straw, corn fodder and stover. Their content of fiber is high. The young plants which produce this roughage contain less woody fiber and are much more nutritious than after they have reached maturity.

Answer 7.

Farm animals, like horses, cattle and sheep, are so constituted that they can consume much more bulky food than swine. The ruminants are especially adapted to the consumption of bulky food. Owing to this fact the nutrients of coarse fodders can be utilized for the production of energy, food and raiment for the human race. The office of coarse fodders is to increase the volume of rations so as to make them suitable for the former class of farm animals just mentioned.

Answer 8.

Protein is the most complicated of all the nutrients of a feeding stuff. It consists of the four elements—carbon, hydrogen, oxygen and nitrogen. It has its counterpart in the various nitrogenous bodies found in the animal system, and is the only source of these bodies. The function of protein, therefore, is chiefly to furnish the material for forming the flesh, sinews, nerves, hair, hoofs, horns, casein of milk and many other nitrogenous bodies found in the animal economy. Protein may also be utilized for the production of energy and the formation of fat in the animal body, but since it is the most expensive of all the nutrients it should never be put to the latter uses, which can be accomplished as well by the cheaper non-nitrogenous nutrients, fat and carbohydrates.

Answer 9.

The function of the fat in a feeding stuff is two-fold. In the first place it can be directly assimilated and thus produce animal fat, and in the second place it may serve for the production of animal heat and energy. The energy produced by the digestible fat of feeding stuff is two and one-fourth times as great as that produced by an equal weight of carbohydrates.

Answer 10.

The nitrogen-free extract of a feeding stuff is the difference between one hundred and the sum of the moisture, protein, fat, fiber and ash. The digestible portions of this, together with any digested fiber, are known as carbohydrates. Like the fat, the function of the digestible carbohydrates is two-fold. They may serve for the production of fat and other non-nitrogenous bodies in the animal system as well as for the production of energy.

Answer 11.

It goes without saying that the inorganic or mineral constituents of a feeding stuff are essential for the formation of the bones in the animal body, as these

consist of about sixty per cent .of mineral matter. Especially is this true for the young and growing animal. But this is not the only function of the inorganic nutrients. Their presence is absolutely essential in all the vital processes of nutrition and assimilation. The full-grown animal, therefore, whose bones are completely developed, requires a constant supply of these ingredients with its food in order to exist. Little attention is paid to these essential ingredients by the feeder of farm animals, since the natural feeding stuffs contain these nutrients in ample proportion excepting common salt.

Answer 12.

Of late years there appeared among the concentrated commercial feeding stuffs a number of by-products which, from the method of their preparation, must necessarily be deficient in ash ingredients or inorganic nutrients. Among these may be mentioned brewers' grains, distillers' grains, starch refuse, and dried beet chips. All of these by-products have in the process of manufacture been exhausted with large volumes of water, and consequently the soluble salts of the ash ingredients must be largely extracted. These products should never be fed alone, and should only be the minor part of a ration in connection with other feeding stuffs of non-ash constituents.



## TO THE MANUFACTURERS, DEALERS AND CONSUMERS OF COMMERCIAL FEED STUFFS.

This Department submits herewith report of analyses of samples of licensed brands of commercial feed stuffs collected by inspectors and sold in Ohio during the year 1909.

## SUMMARY OF THE LAW.

The law to regulate the sale of commercial feed stuffs in Ohio will be found on the last pages of this Report. Special attention is called to the necessity of labeling all packages, even when sales are made from original sacks or from bulk, showing number of net pounds, name of brand or trade-mark, name of manufacturer or shipper, place of business, with percentages claimed of crude protein, crude fat and crude fiber, and the ingredients of which feed is composed. Observance of these conditions of the law will be conducive of good feeling and confidence between this Department and parties most interested.

## PENALTIES.

Violation of any of the provisions of the Feeding Stuff Law is punishable on conviction by a fine. Offender also liable for damages sustained by purchaser for a deficiency of more than two percentum of crude protein or two percentum of crude fat, or an excess of two percentum of crude fiber claimed to be contained in said commercial feed stuffs.

## FEES.

All licenses expire with the calendar year, December 31st. Hence any commercial feed stuffs found on the market at any time during the year will require license—fee is \$25—and same cannot be prorated under the provisions of this act. Persons handling such feeds should see that they are licensed for sale in the state.

## ANALYSES OF SAMPLES.

Correct analyses of all brands found on the markets of the state, with claims of manufacturers, will be found in this Report. In addition to these, we print claims of the manufacturers for those brands not found on the markets by the inspectors.

Our deputy inspectors made diligent search of the state, collecting 1,019 samples of feed, but were unable to find samples of all brands licensed—303—as against 171 in 1908. Of 303 brands licensed, the analyses of 291 appear in this Report.

Inspectors were unable to find the 12 samples not reported, so only claims of manufacturer are printed.

## PROSECUTIONS.

This Department brought seven prosecutions for wilful violations of Sections 1 and 3 of the Ohio Feed Stuff Law. Failure to label packages and neglect to license goods caused parties to plead guilty and were fined from \$2 to \$25 and costs.

## OBJECT OF LICENSE.

Law requires feeds termed "commercial feed stuffs" to be licensed. License no guarantee of purity or high feeding value. This Department will analyze the goods as found on the market and publish the result of chemist findings. The purchaser must decide for himself as to the quality of the licensed goods offered for sale.

## PERCENTAGE AMOUNT.

This is the amount in 100. If feed is guaranteed to contain 12 per cent. protein, 3 per cent. of fat and 7 per cent. of fiber every 100 pounds of it should contain 12 pounds of protein, 3 pounds of fat and 7 pounds of fiber, and a ton should contain 20 times these amounts.

## FUNCTION OF THE NUTRIENTS.

Crude protein and crude fat are called nutrients because they build up and restore old tissues and maintain the animal body.

Crude Protein—Essential ingredient in the formation of flesh, ligaments, muscles, tendons, sinews, hair, hide and all portions of the body which have strength. Protein builds up the animal machinery and is the source of casein in milk and the basis of the blood.

Crude Fat—Heat and energy producer. Also keeps digestive tract in good condition.

Crude Fiber—Has least value of all constituents of feeding stuffs. Its principal value seems to be as a source of roughness. A portion of the crude fiber of some feeds is digestible. However, digesting it consumes so much energy that a large portion of the value is taken up in the process of digestion. Corn cobs, oat hulls, peanut hulls, cotton seed hulls and similar material used as adulterants for feeding stuff contain much fiber.

## DEALERS TAKE WARNING.

Many dealers handling unlicensed goods were called upon to pay license fee, as manufacturers declined to do so.

Law requires manufacturer to pay \$25 each year for the privilege of selling or offering for sale commercial feed stuffs in Ohio.

Whenever manufacturer or importer fails to pay fee, any person, company, firm or agent handling such goods is liable for fee named.

Any dealer selling without license is subject to fine.

## DESCRIPTION OF PRODUCTS.

A feed containing corn bran, wheat bran, screenings, sweepings, corn cob oat hulls and such material must be licensed.

### From Barley.

Malt sprouts are the dried shoots secured in the germination of barley in the production of malt.

Brewers' dried grains consist of the residue left after mashing the malt. The residue is dried and placed on the market as a feed.

### From Oats.

Oat feed composed of oat hulls and other foreign material. Oat hulls have little feeding value.

### From Cotton Seed.

Cotton seed meal is the residue left after the cotton seed hulls have been removed and the oil extracted. Is rich in protein and fat and used extensively in Ohio.

### From Flaxseed.

Linseed meal secured from ground flaxseed, and is the residue left after extracting the oil.

### From Corn.

Hominy feed consists of the germ and starchy portion of the corn kernel and possibly corn bran.

Gluten feed is the by-product secured in the manufacture of starch and glucose. Consists of the bran coating, gluten and germ.

Corn cob meal is low in protein and fat and high in fiber. Has little feeding value and is a common adulterant of feeding stuffs.

### From Wheat.

Bran consists of the outer portion of the wheat grain. Owing to its protein and fat is a valuable feed.

Middlings is the coating of the wheat grain below the bran layer.

Screenings are the smaller, imperfect grains of wheat, weed seeds and other foreign materials.

### Mixed Feeds of Corn and Oats.

Generally sold under the name of Chop Feed by mixing corn and oats together.

### Molasses Feed.

Mixtures of brewers' grains, malt sprouts, oat hulls, linseed meal, cotton seed meal and grain screenings with molasses.

## AVERAGE COMPOSITION OF FEEDING STUFFS,

	Protein	Fat	Fiber
	Per Cent.	Per Cent.	Per Cent.
<b>HAY, ETC.</b>			
Timothy hay (in full bloom) .....	6.0	3.0	29.6
Red clover hay (in full bloom).....	12.4	4.5	21.9
Alfalfa hay.....	14.3	2.2	25.0
Cowpea hay.....	16.6	2.2	20.1
Wheat straw.....	3.4	1.3	38.1
Rye straw.....	3.0	1.2	38.9
Oats straw.....	4.0	2.3	37.0
Corn stover (field cured).....	3.8	1.1	19.7
<b>GRAIN</b>			
Corn (Dent).....	10.3	5.0	2.2
Oats.....	11.8	5.0	9.5
Rye.....	10.6	1.7	1.7
Wheat (winter).....	11.8	2.1	1.8
Barley.....	12.4	1.8	2.7
Sunflower.....	16.3	21.4	29.9
Buckwheat.....	10.0	2.2	8.7
<b>BY-PRODUCTS</b>			
Wheat bran (winter).....	16.0	4.0	8.1
Wheat middlings.....	15.6	4.0	4.6
Cotton seed meal.....	42.3	13.1	5.6
Linseed meal (old process).....	32.9	7.9	8.9
Linseed meal (new process).....	33.2	3.0	9.5
Malt Sprouts.....	23.2	1.7	10.7
Dried beet pulp.....	7.9	0.6	17.4
Corn bran.....	9.0	5.8	12.7
Wheat screenings.....	12.5	3.0	4.9
<b>WASTE PRODUCTS</b>			
Corn cob.....	1.5	0.3	24.0
Oat hulls.....	3.4	1.3	30.7
Rice hulls.....	2.9	1.2	33.5
Buckwheat hulls.....	4.9	1.0	43.1
Cotton seed hulls.....	3.7	1.5	43.6

# TABULATED ANALYSES OF COMMERCIAL FEED STUFFS FOR THE YEAR ENDING DECEMBER 31, 1909.

All analyses are made by Prof. H. A. Weber, Ohio State University,  
Columbus, Official Chemist.

Record Number	Name of Feed Stuff and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
1	Old Process Oil Meal. .... } American Linseed Co., Toledo, O. .... }	Claimed Found	32.00 35.44	5.00 6.00	7.00 7.05
2	Dewey's Distillers' Dried Grains .... } The Dewey Bros. Co., Blanchester, O. .... }	Claimed Found	30.00 25.37	12.00 10.39	10.00 9.75
3	Schumacker Stock Feed. .... } The Quaker Oats Co., Chicago, Ill. .... }	Claimed Found	10.00 11.81	4.00 4.50	10.00 9.28
4	Buffalo Gluten Feed. .... } Corn Products Refining Co., Chicago, Ill. .... }	Claimed Found	23.00 30.18	2.50 2.04	8.50 6.72
5	Owl Brand Cotton Seed Meal. .... } F. W. Brode & Co., Memphis, Tenn. .... }	Claimed Found	41.00 43.18	6.00 9.18	10.00 6.27
6	Old Process Oil Meal. .... } Metzger Seed & Oil Co., Toledo, O. .... }	Claimed Found	30.00 35.83	5.00 7.36	10.00 7.82
7	Michigan Farmer Brand Cotton Seed Meal .... } J. E. Bartlett Co., Jackson, Mich. .... }	Claimed Found	41.00 43.31	9.00 10.17	10.00 7.42
8	Sugarota. .... } Northwest Mills Co., Winona, Minn. .... }	Claimed Found	18.00 17.94	4.50 8.66	14.00 19.33
9	Pine Tree Scratch Feed. .... } The Albert Dickinson Co., Chicago, Ill. .... }	Claimed Found	10.50 11.81	3.00 3.48	5.00 3.55
10	Queen Poultry Mash. .... } The Albert Dickinson Co., Chicago, Ill. .... }	Claimed Found	10.50 12.25	3.00 3.14	7.00 10.10
11	Globe Scratch Feed. .... } The Albert Dickinson Co., Chicago, Ill. .... }	Claimed Found	10.50 12.25	3.00 2.73	5.00 5.55
12	Crescent Chick Feed. .... } The Albert Dickinson Co., Chicago, Ill. .... }	Claimed Found	10.50 10.94	3.00 3.15	5.00 2.70
13	Sucrene Dairy Feed. .... } American Milling Co., Chicago, Ill. .... }	Claimed Found	16.50 18.38	3.50 4.44	12.00 11.75
14	Schumacher Scratching Grains .... } The Quaker Oats Co., Chicago, Ill. .... }	Claimed Found	10.50 11.37	3.00 3.19	4.50 3.30
15	Admiral Chick Feed. .... } Mayflower Mills, Fort Wayne, Ind. .... }	Claimed Found	10.00 11.81	2.50 3.08	2.50 2.60
16	Sugared Cow Feed. .... } International Sugar Feed Co., Minneapolis, Minn. .... }	Claimed Found	16.50 19.69	3.50 4.87	12.50 11.80
17	Sugared Horse Feed. .... } International Sugar Feed Co., Minneapolis, Minn. .... }	Claimed Found	12.50 15.31	5.00 3.38	12.50 8.95
18	Badger Stock Feed. .... } Chas. A. Krause Milling Co., Milwaukee, Wis. .... }	Claimed Found	10.00 15.75	4.00 3.84	14.00 8.90
19	Badger Dairy Feed. .... } Chas. A. Krause Milling Co., Milwaukee, Wis. .... }	Claimed Found	16.00 18.81	3.50 4.06	12.00 12.30
20	Diamond Gluten Feed. .... } Corn Products Refining Co., Chicago, Ill. .... }	Claimed Found	23.00 29.39	2.50 2.50	8.50 8.05
21	Peters' June Pasture Dairy Meal. .... } M. C. Peters Mill Co., Omaha, Neb. .... }	Claimed Found	12.00 12.25	1.00 0.65	26.00 21.80

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
22	Boss Chop Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	8.50 10.50	3.50 5.19	11.00 10.88
23	Suprene Horse and Mule Feed..... American Milling Co., Chicago, Ill.....	Claimed Found	10.00 11.37	3.00 4.49	13.50 10.05
24	King Pigeon Feed..... The Albert Dickinson Co., Chicago, Ill.....	Claimed Found	10.50 11.81	3.00 2.90	5.00 8.85
25	Peters' Alfalfa Sugar Meal..... M. C. Peters Mill Co., Omaha, Neb.....	Claimed Found	11.00 14.00	1.50 1.00	22.00 20.50
26	Excelsior Chop Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	8.50 10.50	3.50 4.61	11.00 7.53
27	Sun Chick Starter..... The Albert Dickinson Co., Chicago, Ill.....	Claimed Found	10.50 10.50	3.00 3.04	5.00 2.60
28	Victor Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	7.50 7.88	3.00 2.63	12.00 12.40
29	Hominy Feed..... Suffern, Hunt & Co., Decatur, Ill.....	Claimed Found	7.10 11.37	9.30 8.83	10.00 4.80
30	Corno Hen Feed..... The Corno Mills Co., St. Louis, Mo.....	Claimed Found	10.00 10.94	3.70 3.50	2.30 1.95
31	S. W. C. Linseed Meal..... The Sherwin-Williams Co., Cleveland, O.....	Claimed Found	33.00 33.69	6.00 15.29	8.00 7.30
32	C. O. & B. Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.00 12.25	4.00 4.14	10.00 12.05
33	"Buckeye"..... Buckeye Cotton Oil Co., Cincinnati, O.....	Claimed Found	39.00 38.50	7.00 6.25	10.00 11.66
34	Sterling Chick Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	11.00 10.06	3.50 2.64	5.00 3.05
35	Daisy Horse Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	12.00 13.13	3.50 1.37	11.00 13.75
36	Sterling Stock Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	10.00 10.94	4.00 3.65	9.00 9.55
37	Bon Ton Poultry Feed..... Mayflower Mills, Fort Wayne, Ind.....	Claimed Found	10.00 11.37	2.50 2.75	2.50 2.10
38	Ground Linseed Cake..... Hirst & Begley Linseed Co., Chicago, Ill.....	Claimed Found	34.00 33.69	8.00 9.42	9.00 8.05
39	Schumacher Calf Meal..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	19.00 21.00	8.00 8.41	3.00 2.60
40	Hammond Dairy Feed..... Western Grain Products Co., Hammond, Ind.....	Claimed Found	17.00 17.06	3.00 5.14	9.00 15.05
41	Sterling Scratch Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	11.00 10.94	3.00 3.55	6.00 3.45
42	Dried Beet Pulp..... The Larowe Milling Co., Detroit, Mich.....	Claimed Found	8.00 10.94	0.50 0.55	20.00 15.75
43	Johnson's Scratch Feed..... L. H. Johnson, Springfield, O.....	Claimed Found	10.94 11.37	3.23 3.28	7.05 4.15
44	Otto Weiss Alfalfa Stock Food..... The Otto Weiss Alfalfa Stock Food Co., Wichita, Kan.....	Claimed Found	12.00 12.25	3.50 3.65	15.00 11.25
45	XXX Dairy Feed..... Milwaukee Grains & Feed Co., Milwaukee, Wis.....	Claimed Found	15.00 17.50	2.50 1.97	10.00 8.67
46	Sugarine Dairy Feed..... The Sugarine Co., Chicago, Ill.....	Claimed Found	16.50 17.94	3.50 5.81	12.00 14.12

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuff and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
47	Prime Cotton Seed Meal .....	Claimed	41.00	7.5	14.00
	The Hunter Bros. Milling Co., St. Louis, Mo. .... }	Found	40.24	9.29	7.97
48	Keever Gluten Feed .....	Claimed	22.00	8.00	6.00
	The Keever Starch Co., Columbus, O. .... }	Found	19.69	7.35	5.95
		Found	20.56	5.11	6.90
49	Coin Brand Poultry Feed .....	Claimed	10.50	3.00	6.00
	The Illinois Seed Co., Chicago, Ill. .... }	Found	11.37	2.63	7.60
50	Monitor Brand Chick Feed .....	Claimed	10.50	3.0	6.00
	The Illinois Seed Co., Chicago, Ill. .... }	Found	12.25	3.03	4.09
51	Phoenix Brand Poultry Feed .....	Claimed	10.50	3.00	6.00
	The Illinois Seed Co., Chicago, Ill. .... }	Found	11.81	4.42	6.96
52	Peters' Arab Horse Feed .....	Claimed	10.00	3.00	11.50
	M. C. Peters Mill Co., Omaha, Neb. .... }	Found	10.94	2.70	10.18
53	Daisy Dairy Feed .....	Claimed	14.00	3.00	11.00
	The Great Western Cereal Co., Chicago, Ill. .... }	Found	14.00	2.03	16.65
54	Ground Linseed Cake .....	Claimed	32.00	6.00	10.00
	Archer-Daniels Linseed Co., Minneapolis, Minn. .... }	Found	33.69	7.65	6.70
55	Union Grains (Ublko), Biles' Ready Ration .....	Claimed	24.00	7.00	9.00
	The J. W. Biles Co., Cincinnati, O. .... }	Found	25.81	7.33	9.97
56	Corno Chick Feed .....	Claimed	10.00	3.50	3.40
	The Corno Mills Co., St. Louis, Mo. .... }	Found	10.94	2.81	2.57
57	Columbian Chop Feed .....	Claimed	10.94	5.53	5.80
	Endslow Mill Co., Columbus, O. .... }	Found	8.31	4.00	7.05
58	Dewey's Distillers' Dried Grains .....	Claimed	20.00	6.00	15.00
	The Dewey Bros. Co., Blanchester, O. .... }	Found	21.88	3.83	14.88
59	Dewine's Laying Feed .....	Claimed	10.35	2.65	3.85
	The John De Wine Co., Yellow Springs, O. .... }	Found	11.37	3.14	2.55
60	Snow King Germ Food .....	Claimed	12.25	6.85	4.78
	The Sam W. Weidler Co., Cincinnati, O. .... }	Found	12.69	7.70	7.35
61	Malt Sprouts .....	Claimed	23.00	1.00	15.00
	The J. W. Biles Co., Cincinnati, O. .... }	Found	25.81	0.96	16.15
62	Snow King Chop Feed .....	Claimed	11.81	8.93	4.82
	The Sam W. Weidler Co., Cincinnati, O. .... }	Found	11.81	7.50	7.40
63	Choice Cotton Seed Meal .....	Claimed	41.00	9.00	10.50
	The American Cotton Oil Co., New York, N. Y. .... }	Found	43.31	7.86	7.95
64	Biles' Fourx (XXXX) Grains .....	Claimed	31.00	12.00	13.00
	The J. W. Biles Co., Cincinnati, O. .... }	Found	28.88	11.05	14.28
65	Colonial Developing Feed .....	Claimed	10.50	3.00	5.00
	The Albert Dickinson Co., Chicago, Ill. .... }	Found	12.25	2.52	1.88
66	Snow King Hominy Feed .....	Claimed	10.06	7.89	4.35
	The Sam W. Weidler Co., Cincinnati, O. .... }	Found	11.81	9.49	4.54
67	Dried Brewers' Grain .....	Claimed	26.02	6.28	15.39
	The F. L. Emmert Co., Cincinnati, O. .... }	Found	25.37	6.51	14.27
68	Hominy Feed .....	Claimed	10.70	7.80	2.20
	Perin Bros., Cincinnati, O. .... }	Found	12.25	9.57	4.40
69	Acme Chick .....	Claimed	11.00	5.00	10.00
	J. Charles McCullough, Cincinnati, O. .... }	Found	10.50	2.10	3.44
70	Midland Pure Old Process Ground Linseed Cake .....	Claimed	32.00	6.00	10.00
	Midland Linseed Co., Minneapolis, Minn. .... }	Found	36.31	7.24	8.43
71	Cuddomeal .....	Claimed	15.00	3.00	33.00
	The Bartlett Co., Jackson, Mich. .... }	Found	14.87	4.05	33.70

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
72	Dewine's Chick Feed ..... The John De Wine Co., Yellow Springs, O.....	Claimed Found	10.40 14.44	2.85 5.57	3.75 3.38
73	Creamo Brand Cotton Seed Feed Meal..... Tennessee Fibre Co., Memphis, Tenn.....	Claimed Found	22.00 22.75	5.00 5.63	22.00 *22.56
74	Oil Meal ..... Thompson & Co., Allegheny, Pa.....	Claimed Found	32.00 34.56	5.50 9.11	11.00 8.36
75	Corn, Oats and Barley Chop ..... The Imperial Grain & Milling Co., Toledo, O....	Claimed Found	8.90 10.50	3.70 3.30	11.75 12.25
76	Schumacher Little Chick Feed ..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 10.94	3.50 3.17	3.00 1.80
77	American Poultry Food ..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	12.00 14.00	3.50 5.01	9.00 4.46
78	Malt Sprouts ..... The Edward Sohngen Malt Co., Hamilton, O....	Claimed Found	24.50 26.69	1.30 1.72	12.70 13.35
79	Dewine's Developing Food ..... The John De Wine Co., Yellow Springs, O.....	Claimed Found	10.25 11.81	2.75 3.56	3.50 2.20
80	Regal Stock Feed ..... The Imperial Grain & Milling Co., Toledo, O....	Claimed Found	8.10 10.06	3.70 3.42	12.75 13.52
81	Gregson's Calf Meal ..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	25.00 25.81	5.00 7.18	5.00 4.65
82	Homco Feed ..... American Hominy Co., Indianapolis, Ind.....	Claimed Found	8.50 11.81	7.00 8.55	7.00 4.43
83	Star Brand Cotton Seed Meal ..... J. Lindsay Wells Co., Memphis, Tenn.....	Claimed Found	41.00 30.62	9.00 6.15	7.00 15.18
84	Hammond Horse Feed ..... Western Grain Products Co., Hammond, Ind....	Claimed Found	11.00 15.75	4.00 3.30	9.00 12.68
85	M. D. Chop ..... The Toledo Grain & Milling Co., Toledo, O.....	Claimed Found	8.00 10.94	3.50 3.88	10.00 3.90
86	Quaker Dairy Feed ..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	12.00 14.44	3.00 3.70	17.00 16.72
87	O X O Hominy Feed ..... Decatur Cereal Co., Decatur, Ill.....	Claimed Found	11.02 9.63	7.70 7.96	4.13 3.22
88	Malted Sugar Meal ..... W. S. Rhoads & Co., Chicago, Ill.....	Claimed Found	25.50 25.81	9.80 9.09	7.50 8.41
89	Honeysuckle Calf Meal ..... W. S. Rhoads & Co., Chicago, Ill.....	Claimed Found	24.80 26.25	6.50 6.27	5.40 5.66
90	Acme Chop Feed ..... Nickel Plate Elevator & Coal Co., Cleveland, O..	Claimed Found	9.19 9.63	3.70 4.15	5.58 7.30
91	Corno Horse and Mule Feed ..... The Corno Mills Co., St. Louis, Mo.....	Claimed Found	10.00 11.81	3.50 3.90	12.00 11.15
92	Acme Chick Feed ..... Nickel Plate Elevator & Coal Co., Cleveland, O..	Claimed Found	9.63 10.06	3.15 2.06	1.95 2.55
93	No. 2 Chop Feed ..... The Commercial Milling Co., Cleveland, O.....	Claimed Found	7.90 9.63	3.70 3.95	..... 7.05
94	Pearl Hominy Feed ..... E. I. Bailey, Cleveland, O.....	Claimed Found	10.26 11.81	8.70 9.03	3.84 5.25
95	Buckeye Mixed Feed ..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	13.00 16.18	4.00 5.08	8.00 8.10
96	Perfect Scratching Food ..... Albert H. Buehrle, Youngstown, O.....	Claimed Found	10.50 10.06	3.00 3.62	5.00 3.69

\*Contains cotton seed hulls.



## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuff and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
97	Very Best Poultry Food ..... The Canton Feed Co., Canton, O. ....	Claimed Found	10.50 9.63	3.00 3.15	5.00 2.88
98	Gold Medal Scratch Feed ..... Bowden & Snider, Mansfield, O. ....	Claimed Found	10.00 13.13	3.00 4.61	6.00 4.79
99	Perfect Chick Food ..... Albert H. Buehrle, Youngstown, O. ....	Claimed Found	10.50 10.94	3.00 3.38	5.00 3.68
100	Ubiko Horse Feed ..... The J. W. Biles Co., Cincinnati, O. ....	Claimed Found	16.00 19.25	6.00 6.70	9.00 10.15
101	Darling's Scratching Food ..... Darling & Company, Chicago, Ill. ....	Claimed Found	8.00 11.37	2.50 3.57	10.00 7.96
102	Darling's Laying Food ..... Darling & Company, Chicago, Ill. ....	Claimed Found	18.00 18.38	3.50 3.84	10.00 14.71
103	Old Process Oil Cake Meal ..... Mayflower Mills, Ft. Wayne, Ind. ....	Claimed Found	30.00 33.25	8.00 8.59	7.00 8.26
104	Old Process Laxo Cake Meal ..... Laxo-Cake-Meal Co., Chicago, Ill. ....	Claimed Found	25.00 27.13	8.00 8.57	9.00 11.41
105	Climax Corn Distillers Grains ..... Deutsch & Sickert Co., Milwaukee, Wis. ....	Claimed Found	33.00 31.94	11.00 11.82	14.00 15.15
106	Piel Bros. Gluten Feed ..... Piel Bros. Starch Co., Indianapolis, Ind. ....	Claimed Found	22.50 25.37	2.00 2.45	8.00 7.34
107	Makline Dairy Feed ..... Miller & Neal, Warren O. ....	Claimed Found	16.00 24.94	5.00 4.85	..... 10.06
108	Star Feed ..... The Toledo Elevator Co., Toledo, O. ....	Claimed Found	7.00 10.50	5.50 6.15	12.50 14.24
109	Green Diamond Cotton Seed Meal ..... Chapin & Co., St. Louis, Mo. ....	Claimed Found	41.00 43.75	9.00 8.25	10.00 9.58
110	Continental Gluten Feed ..... Continental Cereal Co., Peoria, Ill. ....	Claimed Found	33.00 30.18	14.00 13.45	8.50 11.37
111	Sterling Mixed Feed ..... Indiana Milling Co., Terre Haute, Ind. ....	Claimed Found	11.50 14.00	3.00 3.29	15.00 15.00
112	Cedar Rapids Gluten Feed ..... Douglas & Co., Cedar Rapids, Iowa ....	Claimed Found	23.00 24.50	4.00 4.04	7.00 8.92
113	Old Process Oil Meal ..... E. L. Bailey, Cleveland, O. ....	Claimed Found	32.00 35.44	8.00 8.25	8.00 8.67
114	Malt Sprouts ..... American Malting Co., Hamilton, O. ....	Claimed Found	25.37 24.50	1.63 2.33	13.20 14.69
115	Dandy Corn and Oat Chop ..... Bowden & Snider, Mansfield, O. ....	Claimed Found	8.00 10.94	3.00 4.34	..... 4.58
116	Wheat and Corn Bran Mixed ..... Gehres Bros., Portsmouth, O. ....	Claimed Found	11.00 13.56	4.50 5.24	12.00 9.99
117	Marfield's Hominy Feed ..... Marfield Milling Co., Chillicothe, O. ....	Claimed Found	10.76 11.37	7.14 8.91	3.95 4.55
118	Feed-Well Mill Feed ..... Illinois Feed Mills, St. Louis, Mo. ....	Claimed Found	10.00 12.25	3.50 3.62	6.00 3.10
119	Royal Poultry Food ..... W. J. Byrnes & Co., Chicago, Ill. ....	Claimed Found	11.00 14.00	3.25 3.57	5.00 7.40
120	Domestic Chick Feed ..... Zack Davis Co., Delaware, O. ....	Claimed Found	10.00 11.37	3.00 3.51	4.20 4.29
121	Bell Grain and Seed Screenings ..... J. Chas. McCullough, Cincinnati, O. ....	Claimed Found	10.00 13.13	3.00 5.41	11.00 11.38

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
122	Malzevalfa Feed..... The Great Western Cereal Co., Chicago, Ill.....	Claimed Found	11.00 13.56	3.50 2.73	11.00 12.64
123	Good Luck Mill Feed..... Good Luck Mills, St. Louis, Mo.....	Claimed Found	10.00 11.37	3.50 3.36	6.00 4.34
124	Quaker Chick Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 11.37	3.50 3.03	3.00 2.72
125	Corn Feed Meal..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	8.50 11.81	3.00 9.53	4.00 2.53
126	Premium Corn and Oat Chop..... The Imperial Grain & Milling Co., Toledo, O.....	Claimed Found	8.00 10.50	3.50 3.45	13.00 13.38
127	Schumacher Special Horse Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	9.25 10.94	3.50 2.70	7.25 3.12
128	Red Comb Fine Chick Feed..... Edwards & Loomis Co., Chicago, Ill.....	Claimed Found	11.00 10.50	3.40 3.23	3.00 7.28
129	Clinton Gluten Feed..... Clinton Sugar Refining Co., Clinton, Iowa.....	Claimed Found	23.00 24.94	3.00 4.75	7.50 8.69
130	Malt Sprouts..... Callahan & Neff, Canfield, O.....	Claimed Found	20.00 25.81	1.00 1.68	14.00 15.57
131	Ordinary Feed Meal..... The Toledo Grain and Milling Co., Toledo, O.....	Claimed Found	7.50 9.19	3.50 3.90	8.00 4.22
132	Red Comb Poultry Feed..... Edwards & Loomis Co., Chicago, Ill.....	Claimed Found	10.80 11.81	3.30 3.21	5.50 3.95
133	Pioneer Stock Feed..... The Pioneer Cereal Co., Akron, O.....	Claimed Found	10.00 11.81	3.50 3.49	3.50 4.76
134	Red Comb Coarse Chick Feed..... Edwards & Loomis Co., Chicago, Ill.....	Claimed Found	11.00 11.37	3.70 2.68	3.10 2.60
135	Cackle Poultry Feed..... Edwards & Loomis Co., Chicago, Ill.....	Claimed Found	9.50 11.37	3.70 3.28	3.00 3.29
136	Blatchford's Calf Meal..... J. W. Barwell, Waukegan, Ill.....	Claimed Found	25.00 28.00	5.00 4.30	4.25 4.58
137	Malt Sprouts..... The Piqua Malt Co., Piqua, O.....	Claimed Found	26.83 27.56	3.00 1.18	12.87 9.45
138	Choice Cotton Seed Meal..... Roberts Cotton Oil Co., Cairo, Ill.....	Claimed Found	40.00 37.18	9.00 10.67	8.00 11.23
139	Royal Corn and Oat Feed..... The Beck Cereal Co., Detroit, Mich.....	Claimed Found	8.31 10.06	5.10 5.52	5.81 6.82
140	Sleepy Eye Chick Food..... Sleepy Eye Milling Co., Sleepy Eye, Minn.....	Claimed Found	11.00 13.56	1.90 2.87	3.75 2.67
141	Sleepy Eye Scratch Food..... Sleepy Eye Milling Co., Sleepy Eye, Minn.....	Claimed Found	11.00 10.50	1.90 3.93	3.75 3.40
142	Purity Chick Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 10.50	3.50 3.15	3.00 2.09
143	C. Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	7.50 7.44	3.00 2.73	12.00 15.90
144	Purity Hen Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 10.50	3.50 4.00	4.50 2.78
145	Harper's Mixed Alfalfa Stock Feed..... Jas. Harper & Sons, Wichita, Kan.....	Claimed Found	12.00 14.00	3.50 3.35	12.00 13.49
146	K. K. K. Gluten Feed..... J. C. Hubinger Bros. Co., Keokuk, Iowa.....	Claimed Found	23.50 24.94	2.60 2.20	8.50 8.25

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuff and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
147	Blue Ribbon Chick Feed ..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 10.06	3.50 3.05	3.00 1.85
148	Blue Ribbon Scratching Grains ..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 11.81	3.50 3.51	4.50 1.95
149	Forcing Food ..... Cyphers Incubator Co., Buffalo, N. Y.....	Claimed Found	12.89 10.94	3.80 2.78	4.30 4.13
150	Laying Food ..... Cyphers Incubator Co., Buffalo, N. Y.....	Claimed Found	17.31 13.13	3.80 2.85	3.20 4.21
151	Balanced Ration Dairy Feed ..... W. D. Satterthwait Co., Salem, O.....	Claimed Found	19.90 18.38	5.61 5.08	6.71 8.64
152	Superior Dairy Feed ..... The Wadsworth Feed Co., Warren, O. ....	Claimed Found	18.00 16.62	4.00 4.46	10.00 9.80
53	Superior Horse Feed ..... The Wadsworth Feed Co., Warren, O. ....	Claimed Found	11.00 12.69	5.00 3.77	10.00 6.78
154	Otto Weiss Alfalfa Oats Food ..... The Otto Weiss Alfalfa Stock Food Co., Wichita, Kan. ....	Claimed Found	12.00 14.87	3.50 4.10	15.00 11.83
155	Logan Hominy Feed ..... The Standard Cereal Co., Chillicothe, O.....	Claimed Found	10.00 11.81	7.00 7.54	6.00 2.13
156	Purina Mill Feed—Chick Size ..... Ralston Purina Co., St. Louis, Mo. ....	Claimed Found	11.00 13.56	3.60 3.58	4.00 3.59
157	Purina Mill Feed—Scratch Size ..... Ralston Purina Co., St. Louis, Mo. ....	Claimed Found	11.00 14.87	3.60 2.94	4.00 3.45
158	Darling's Chick Feed ..... Darling & Co., Chicago, Ill. ....	Claimed Found	8.00 10.94	1.00 2.58	10.00 *14.55
159	Digester Tankage ..... Swift & Company, Chicago, Ill. ....	Claimed Found	60.00 50.76	8.00 14.13	..... 8.33
160	Mixed Feed ..... The Goldcamp Mill Co., Ironton, O.....	Claimed Found	13.63 18.81	7.31 4.36	..... 7.14
161	Empire State Dairy Feed ..... Jay D. Page & Co., Syracuse, N. Y. ....	Claimed Found	28.00 30.62	9.00 12.63	..... 13.23
162	Evans' Hominy Feed ..... Evans Milling Co., Indianapolis, Ind.....	Claimed Found	10.00 11.37	8.00 7.91	7.00 4.88
163	Malt Sprouts ..... The Epstein Malt Co., Cleveland, O.....	Claimed Found	30.18 29.31	1.90 0.83	9.25 9.93
164	Daisy Cow Feed ..... Horton Milling Co., Ashtabula, O. ....	Claimed Found	20.18 21.88	5.38 4.18	13.14 19.26
165	Malt Sprouts ..... M. G. Rankin & Co., Milwaukee, Wis.....	Claimed Found	25.00 9.63	2.00 2.93	14.00 9.27
166	Old Blue Hen's Feed ..... The G. E. Howell Provision Co., Newark, O....	Claimed Found	12.00 10.06	3.50 2.55	5.00 8.62
167	Eaco Midds ..... Everett, Aughenbaugh & Co., Waseca, Minn....	Claimed Found	15.00 17.50	3.00 5.19	8.00 9.57
168	Barley Sprouts ..... The John Wagner Sons Brewing Co., Sidney, O. }	Claimed Found	27.13 26.69	1.43 1.32	11.85 13.76
169	Very Best Corn, Oats and Barley Chop ..... Canton Feed Co., Canton, O.....	Claimed Found	8.50 9.19	3.50 2.85	7.50 8.83
170	Calumet Hominy Feed ..... W. W. & O. L. Hunter, Chicago, Ill. ....	Claimed Found	9.75 16.62	7.25 9.19	..... 4.61

\*Including 12.25 per cent. of sand.

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuff and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
171	No. 2 Chop..... J. W. Browning, Uhrichsville, O. ....	Claimed Found	7.00 12.25	4.00 4.46	10.00 5.26
172	T. C. Chop..... P. W. Sherer, Tuscarawas, O. ....	Claimed Found	7.00 12.69	4.00 4.29	11.00 4.13
173	Dixie Brand Cotton Seed Meal..... Humphreys, Godwin & Co., Memphis, Tenn. ....	Claimed Found	41.00 42.43	7.00 7.89	11.00 8.34
174	Pillsbury's A Middlings..... *Pillsbury-Washburn Flour Mills Co., Ltd., Minneapolis, Minn.....	Claimed Found	15.00 20.56	4.50 5.70	6.00 9.36
175	Shepard's Chick Food..... O. C. Shepard Co., Medina, O.....	Claimed Found	10.50 14.43	3.50 3.43	3.00 2.44
176	Wheat and Corn Bran..... Resener & Co., Gallipolis, O.....	Claimed Found	10.50 17.06	4.00 4.50	13.00 10.20
177	Pure Hominy Feed..... The Hunter Bros. Milling Co., St. Louis, Mo.....	Claimed Found	8.50 10.94	7.00 9.07	10.00 8.05
178	Garland Mixed Feed..... Garland Milling Co., Greensburg, Ind.....	Claimed Found	15.25 18.81	3.75 4.36	9.00 8.10
179	Jersey Mixed Feed..... Indiana Milling Co., Terre Haute, Ind.....	Claimed Found	10.00 11.81	2.50 2.64	16.00 19.69
180	Chamberlain's Perfect Feeds..... W. F. Chamberlain Feed Co., St. Louis, Mo.....	Claimed Found	10.00 13.13	3.50 2.82	6.00 7.68
181	Beef Scrap..... Swift & Company, Chicago, Ill.....	Claimed Found	55.00 55.99	8.00 15.30	..... .....
182	Queen Feed for Pigs..... Corn Products Mfg. Co., Chicago, Ill.....	Claimed Found	17.00 30.62	9.00 7.73	9.00 19.08
183	Chop..... J. H. Martin, New Lexington, O.....	Claimed Found	11.00 11.81	4.50 3.44	12.00 3.10
184	Chop..... H. A. Lowe, New Lexington, O.....	Claimed Found	9.00 10.94	3.00 3.65	10.00 5.59
185	Quaker Scratching Grains..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 12.25	3.00 3.88	4.50 2.39
186	Diamond Hog Meal..... Corn Products Refining Co., Chicago, Ill.....	Claimed Found	18.00 22.75	8.00 11.71	13.00 15.89
187	Malt Sprouts..... The Cleveland & Sandusky Brewing Co., Sandusky, O.....	Claimed Found	25.30 22.75	1.90 1.50	15.46 14.59
188	Dried Brewers' Grains..... The Cleveland & Sandusky Brewing Co., Sandusky, O.....	Claimed Found	21.83 24.50	7.76 6.58	16.71 15.97
189	Ajax Flakes..... Ajax Milling & Feed Co., New York, N. Y.....	Claimed Found	31.00 31.50	12.00 13.19	14.00 13.85
190	Daisy Chick Food..... W. J. Byrnes & Co., Chicago, Ill.....	Claimed Found	12.25 12.25	3.00 3.40	4.90 9.55
191	Prize Winning Hen Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 11.37	3.50 3.76	4.50 2.65
192	Prize Winning Chick Feed..... The Quaker Oats Co., Chicago, Ill.....	Claimed Found	10.50 10.50	3.50 2.95	3.00 1.99
193	Otto Weiss Hen Feed..... The Otto Weiss Alfalfa Stock Food Co., Wichita, Kan.....	Claimed Found	13.89 10.06	3.05 3.27	2.55 2.70

\*Pillsbury-Washburn Flour Mills Co., Ltd., has been changed to read "Pillsbury Flour Mills Company," the word "Company" spelled out in full.

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
194	Otto Weiss Chick Feed..... The Otto Weiss Alfalfa Stock Food Co., Wichita, Kan.....	Claimed Found	13.63 10.50	3.05 2.76	2.81 2.59
195	Dried Distillers' Grains..... George Keller, Newport, Ky.....	Claimed Found	30.30 34.56	9.50 9.04	..... 13.31
196	Turner's Chop Feed..... Turner Bros. & Co., Bremen, O.....	Claimed Found	10.00 10.94	5.00 4.33	7.00 4.45
197	Perfection Chick Feed..... The Ackerman Bros. Co., Mansfield, O.....	Claimed Found	10.50 11.81	3.00 3.65	5.00 2.65
198	Monarch Chop Feed..... Monarch Feed Mills, Delta, O.....	Claimed Found	10.00 11.37	4.50 4.04	10.00 5.78
199	H. B. Chick Food..... H. B. Chemical Co., Hicksville, O.....	Claimed Found	10.94 10.50	3.25 2.19	2.85 3.78
200	Puritan Chick Food..... Puritan-American Poultry Food Mfg. Co., Bound Brook, N. J.....	Claimed Found	12.50 13.13	7.50 6.33	..... 4.95
201	Chop Feed..... M. E. Bell & Co., Gallipolis, O.....	Claimed Found	7.50 11.81	3.00 5.44	5.10 4.48
202	Chop..... McCarty Bros., Junction City, O.....	Claimed Found	9.00 9.63	3.50 4.20	9.00 4.50
203	Mill Feed..... New Lexington Milling Co., New Lexington, O.....	Claimed Found	5.00 11.37	3.00 3.77	25.00 7.30
204	Johnson's Chick Feed..... L. H. Johnson, Springfield, O.....	Claimed Found	11.00 11.37	3.50 5.74	7.00 3.47
205	Globe Scratch Feed..... J. B. Kindell & Co., Covington, O.....	Claimed Found	9.00 12.69	3.00 3.22	5.00 5.48
206	Old Process Ground Linseed Cake..... Midland Linseed Co., Chicago, Ill.....	Claimed Found	32.00 31.94	5.50 7.31	11.00 7.78
207	Tankage..... The Buckeye Reduction Co., Pindlay, O.....	Claimed Found	49.00 50.76	19.51 18.22	..... 1.72
208	Corona Meal..... Corona Milling Co., Greentown, Ind.....	Claimed Found	1.00 3.06	0.20 0.60	37.00 30.15
209	Green Diamond Hominy Feed..... Plint Mill Co., St. Louis, Mo.....	Claimed Found	10.00 11.81	7.00 10.38	5.00 6.32
210	Chop..... The Hanley Milling Co., Coshocton, O.....	Claimed Found	10.00 10.94	4.00 4.71	7.00 5.45
211	No. 1 Yellow Chop..... The Toledo Grain & Milling Co., Toledo, O.....	Claimed Found	9.00 7.44	3.50 3.67	9.00 5.55
212	C. O. and B. Chop..... The Toledo Grain & Milling Co., Toledo, O.....	Claimed Found	9.00 7.00	3.50 3.33	8.00 6.35
213	Mixed Feed..... The R. C. Poage Milling Co., Ashland, Ky.....	Claimed Found	12.94 14.87	4.65 4.70	6.05 7.92
214	Chick Grower..... A. C. Hoyt & Co., Fostoria, O.....	Claimed Found	9.63 9.63	4.20 4.13	3.75 4.38
215	Chop..... Loff Jacobs, Pomeroy, O.....	Claimed Found	9.54 10.06	4.35 4.66	4.90 3.90
216	Folsom's Feed for Horses and Cattle..... E. M. Folsom, Cleveland, O.....	Claimed Found	10.06 9.19	4.16 4.25	6.63 3.44
217	No. 2 Chop..... E. M. Folsom, Cleveland, O.....	Claimed Found	8.75 8.75	3.73 3.35	5.05 3.93

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
218	Globe Scratch Food..... The Lake Shore Elevator Co., Cleveland, O.....	Claimed Found	10.50 13.56	3.00 4.51	5.00 3.60
219	Mixed Dairy Feed..... M. N. Collins, Burton Sta., O.....	Claimed Found	24.00 21.88	9.00 5.43	9.00 8.75
220	Bran..... The Commercial Milling Co., Cleveland, O.....	Claimed Found	14.00 15.31	4.50 5.59	..... 10.33
221	Coarse Middlings..... The Commercial Milling Co., Cleveland, O.....	Claimed Found	14.00 17.06	4.50 6.97	..... 7.51
222	Choice Fine Middlings..... The Commercial Milling Co., Cleveland, O.....	Claimed Found	15.00 14.87	5.00 3.98	..... 3.37
223	Arcade Chop Feed..... Abel Bros., Cleveland, O.....	Claimed Found	7.60 9.19	3.29 3.75	6.11 3.80
224	Wood's Scratching Food..... Wood & Co., Cleveland, O.....	Claimed Found	11.81 10.50	2.60 2.91	2.35 2.13
225	Baby Chick Food..... Wood & Co., Cleveland, O.....	Claimed Found	17.50 10.94	2.67 3.24	1.85 1.42
226	Owl Brand..... Walter G. Trumpler, Tiffin, O.....	Claimed Found	9.00 10.50	4.00 3.75	7.00 3.95
227	Arrow Chicken Feed..... The Travis-Emmick Co., Napoleon, O.....	Claimed Found	10.94 10.50	4.40 3.33	5.85 2.49
228	*Unicorn Dairy Ration..... Chapin & Co., Milwaukee, Wis.....	Claimed Found	26.00 27.56	6.00 5.92	10.00 9.33
229	Farnel Horse Food..... The Lake Shore Elevator Co., Cleveland, O.....	Claimed Found	9.57 10.94	3.99 4.59	5.79 6.35
230	Corn and Wheat Bran..... The Phoenix Mill Co., Marietta, O.....	Claimed Found	14.00 14.00	4.25 4.65	10.00 8.05
231	Chop Feed..... The Star Mill Co., Racine, O.....	Claimed Found	11.81 11.37	4.23 3.55	5.19 4.40
232	Fresh Ground Mill Feed..... Elias Hutton, Frankford, O.....	Claimed Found	20.56 15.31	4.36 4.30	6.55 5.65
233	Mokena Chop..... The Graham & Black Co., Lancaster, O.....	Claimed Found	9.19 9.63	4.02 3.66	4.21 3.11
234	Nickle Plate Hominy..... The Nickle Plate Milling Co., Painesville, O.....	Claimed Found	10.00 9.63	7.00 5.91	6.00 2.32
235	W. & J. Alfalfa Stock Food..... A. M. Jordan, Cleveland, O.....	Claimed Found	10.15 11.81	3.17 2.97	14.89 13.23
236	No. 2 Chop..... The Northwestern Elevator & Mill Co., Mt. Vernon, O.....	Claimed Found	10.37 11.81	2.50 4.20	7.00 5.18
237	Scioto Hominy Feed..... The Scioto Hominy Co., Portsmouth O.....	Claimed Found	10.00 10.94	6.00 8.23	8.00 6.34
238	Flowers Hen Food..... S. W. Flower & Co., Toledo, O.....	Claimed Found	12.69 12.25	4.51 3.83	4.75 3.43
239	Flowers Scratch Food..... S. W. Flower & Co., Toledo, O.....	Claimed Found	11.81 12.69	3.60 2.98	8.20 8.27
240	Kistler's Chop..... S. A. Kistler & Son., North Jackson, O.....	Claimed Found	10.00 12.25	4.00 3.28	4.00 4.07

\*NOTE—Unicorn Dairy Ration, licensed under name of Chapin & Co., Milwaukee, Wis. This firm owns and manufactures Unicorn Dairy Ration for The Ajax Milling & Feed Co., Buffalo, N. Y.

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
241	Chop Feed..... Botzum Bros., Akron, O.....	Claimed Found	10.50 10.94	4.00 3.60	5.00 6.05
242	Monument Brand Chick Food..... Indiana Seed Co., Indianapolis, Ind.....	Claimed Found	10.50 12.25	3.00 3.20	4.50 3.80
243	†Pillsbury's Daisy..... Pillsbury-Washburn Flour Mills Co., Minneapolis-Minn.....	Claimed Found	16.00 16.62	4.50 4.00	4.00 2.85
244	Success Mill Feed—Scratch Size..... Robinson Danforth Co., St. Louis, Mo.....	Claimed Found	10.00 9.63	3.50 3.02	6.00 3.47
245	Cherry's Alamo Feed..... Stock Yards Cotton & Linseed Meal Co., Kansas City, Mo.....	Claimed Found	11.00 12.25	1.00 0.85	16.00 18.15
246	No. 2 White Middlings..... The Toledo Grain & Milling Co., Toledo, O.....	Claimed Found	12.00 13.13	4.00 4.54	6.00 4.40
247	Hominy Feed..... The West S de Hominy Co., Lancaster, O.....	Claimed Found	10.00 11.81	5.00 16.01	5.00 5.75
248	Winner Mill Feed—Scratch Size..... Robinson-Danforth Co., St. Louis, Mo.....	Claimed Found	10.00 9.19	3.50 3.05	6.00 3.58
249	Blatchford's Sugar and Flaxseed..... C. M. Immel, Canal Dover, O.....	Claimed Found	27.00 26.25	10.00 9.31	..... 7.10
250	Cerealia Chicken Feed..... The Early & Daniel Co., Cincinnati, O.....	Claimed Found	11.50 7.88	4.00 3.80	3.75 3.80
251	Mill Feed..... Wheelersburg Milling Co., Wheelersburg, O.....	Claimed Found	10.00 14.87	3.50 4.16	11.50 7.13
252	Union Chop..... The Union Grain & Hay Co., Cincinnati, O.....	Claimed Found	9.25 8.31	3.49 3.39	8.40 5.27
253	Chop..... R. Heath, Shelby, O.....	Claimed Found	8.00 7.88	4.00 3.47	7.00 7.93
254	Chop Feed..... The Hulshizer Milling Co., Newark, O.....	Claimed Found	10.50 12.25	5.00 5.64	10.00 6.20
255	Ground Beef Scrap..... The Wuichet Fertilizer Co., Dayton, Ohio.....	Claimed Found	50.00 54.67	9.00 13.76	1.98 .....
256	Sugarota Horse Feed..... Brickwede & Co., Marietta, O.....	Claimed Found	12.00 13.13	3.50 6.50	..... *21.99
257	Sugarota Swine Feed..... Brickwede & Co., Marietta, O.....	Claimed Found	18.00 15.31	4.50 9.52	..... †22.99
258	Sugarota Horse Feed..... Tenney & Morgan, Newark, O.....	Claimed Found	12.00 13.5	3.50 5.54	..... 17.25
259	Curry's Choice Cotton Seed Meal..... W. C. Curry Co., Louisville, Ky.....	Claimed Found	41.00 38.06	8.50 8.54	8.00 8.16
260	Sugarota Horse Feed..... North West Mills Co., Winona, Minn.....	Claimed Found	12.00 14.00	3.50 9.02	..... 14.85
261	Mueller's Molasses Grains..... Thorniley Bros., Marietta, O.....	Claimed Found	1.00 8.75	1.00 1.17	25.00 21.68
262	Electric Stock Feed..... J. F. Robertson, Steubenville, O.....	Claimed Found	14.00 17.06	2.00 3.83	10.00 13.07
263	O. K. Hen Feed..... The M. A. Bowman Co., Toledo, O.....	Claimed Found	9.40 9.19	2.35 3.65	2.80 7.37

\*Including sand, 3.97.

†Including sand, 4.52.

†Note—Pillsbury-Washburn Flour Mills Company, Ltd., has been changed to read Pillsbury Flour Mills Company, the word "Company" spelled out in full.

## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Continued.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
264	Dayton Dairy Feed ..... Fuls & Fettes, Dayton, O. ....	Claimed Found	7.50 11.81	3.00 4.43	13.00 13.12
265	Badger Alfalfa Horse and Mule Feed ..... Chas. A. Krause Milling Co., Milwaukee, Wis. ..	Claimed Found	10.00 10.08	2.50 3.22	15.00 10.53
266	Cob, Corn and Oats Chop ..... David Brennehan, Orrville, O. ....	Claimed Found	6.00 10.50	4.00 3.94	10.00 9.99
267	H. & S. Alfalfa Feed ..... Dwight E. Hamlin & Co., Pittsburg, Pa. ....	Claimed Found	16.00 17.94	7.00 3.68	16.00 11.73
268	Molac Horse Feed ..... The Quaker Oats Co., Chicago, Ill. ....	Claimed Found	10.00 10.50	3.75 2.82	10.50 9.82
269	No. 2 Chop ..... E. I. Secor, Mt. Vernon, O. ....	Claimed Found	8.00 8.75	3.50 3.96	9.50 7.75
270	Dewine's Chop Feed ..... The John De Wine Co., Yellow Springs, O. ....	Claimed Found	10.00 8.31	4.00 4.01	7.00 2.95
271	Chop Feed ..... D. S. Cook & Co., Basil, O. ....	Claimed Found	10.06 9.19	4.04 3.96	8.50 4.20
272	Hominy Meal ..... The Lockland Milling Co., Lockland, O. ....	Claimed Found	10.94	8.72	4.89
273	Chop ..... A. Deeds & Sons, Lancaster, O. ....	Claimed Found	10.00 10.06	5.00 4.14	5.50 2.98
274	Aetna Chop ..... The Aetna Milling Co., Steubenville, O. ....	Claimed Found	10.00 10.06	3.00 4.84	3.00 4.31
275	Ashland Calf Food ..... Ashland Stock Food Co., Ashland, O. ....	Claimed Found	28.05 21.00	6.10 3.86	3.50 6.72
276	Sugarota Cattle Feed ..... G. N. Mindling, Waterford, O. ....	Claimed Found	12.00 20.12	5.00 2.66	20.82
277	Sugarota Horse Feed ..... G. N. Mindling, Waterford, O. ....	Claimed Found	12.00 17.50	3.50 2.17	23.38
278	Chop ..... Baird Bros., Nelsonville, O. ....	Claimed Found	8.50 9.63	4.00 4.00	5.00 1.85
279	Alfalfa Cerealia ..... The Early & Daniel Co., Cincinnati, O. ....	Claimed Found	23.00 22.31	5.80 5.21	10.00 19.60
280	Oatequal Alfalfa Feed ..... Oatequal Co., Columbus, O. ....	Claimed Found	12.00 14.87	6.00 3.72	10.00 9.80
281	Gem Mixed Feed ..... Oak Hill Milling Co., Oak Hill, O. ....	Claimed Found	17.06 11.81	4.06 4.27	6.45 7.45
282	Corn Distillers' Grains "Success" ..... Deutsch & Sickert Co., Milwaukee, Wis. ....	Claimed Found	26.00 23.62	9.00 8.40	15.00 20.55
283	Chop Feed ..... The Seeds Grain & Hay Co., Columbus, O. ....	Claimed Found	10.00 12.69	2.50 3.93	4.50 7.80
284	Badger Evergreen Feed ..... Chas. A. Krause Milling Co., Milwaukee, Wis. ..	Claimed Found	10.00 9.19	1.00 0.85	30.00 15.55
285	Dewine's Pigeon Feed ..... The John De Wine Co., Yellow Springs, O. ....	Claimed Found	11.69 10.06	2.97 2.54	4.15 2.80
286	O. H. C. Scratching Food ..... O. H. Clough & Co., Mechanicsburg, O. ....	Claimed Found	11.37 11.37	3.08 2.50	4.24 3.90
287	H. & C. Feeding Stuff ..... Postum Cereal Co., Battle Creek, Mich. ....	Claimed Found	8.58 8.75	1.50 1.75	9.58 4.30
288	Cereal Feeding Stuff ..... Postum Cereal Co., Battle Creek, Mich. ....	Claimed Found	11.12 12.25	1.93 2.88	7.19 14.40



## TABULATED ANALYSES OF COMMERCIAL FEED STUFFS—Concluded.

Record Number	Name of Feed Stuffs and Address of Manufacturer	Claimed and Found	Crude Protein	Crude Fat	Crude Fiber
			Per Cent.	Per Cent.	Per Cent.
289	Gold Medal Chick Feed ..... Bowden & Snider, Mansfield, O. ....	Claimed Found	12.00 10.50	4.00 3.55	*5.00 14.45
290	Old Process Oil Meal ..... The Guy G. Major Co., Toledo, O. ....	Claimed Found	30.00 30.18	6.30 4.95	8.20 10.30
291	Owline ..... The Millers & Manufacturers Agency Co., Cleve- land, O. ....	Claimed Found	32.25 35.00	5.30 12.41	8.40 6.65

\*Including sand, 9.85.

## LIST OF COMMERCIAL FEED STUFFS PROPERLY LICENSED.

And offered for sale in Ohio in 1909, but samples of which were not found by the secretary or deputies on the markets, hence they have not been analyzed.

### MANUFACTURERS' CLAIMS.

Address of Manufacturer and Name of Feed Stuffs.	Crude Protein	Crude Fat	Crude Fiber
	Per Cent.	Per Cent.	Per Cent.
American Hominy Co., Indianapolis, Ind. Homcoline Feed.....	16.00	6.50	14.00
American Milling Co., Chicago, Ill. Succrene Alfalfa Horse and Mule Feed.....	10.00	3.50	15.00
Clinton Sugar Refining Co., Clinton, Iowa. Clinton Gluten Feed.....	20 to 25	3.00	7.50
J. & S. Emison & Co., Vincennes, Ind. Hominy Feed.....	11.67	9.27	.....
Everett, Aughenbaugh & Co., Waseca, Minn. Eaco Bran.....	14 to 17	8 to 6	8 to 10
The Louisville Cotton Seed Products Co., Louisville, Ky. "Louisville".....	41.00	6.00	10.00
Merchants Distilling Co., Terre Haute, Ind. Merchants High Grade Dairy Feed.....	81.00	12.00	14.00
M. C. Peters Mill Co., Omaha, Neb. Peters Acorn Sugar Feed.....	10.00	2.00	15.00
Peters Lucern (Alfalfa Meal).....	12.00	0.50	33.00
Pfeffer Milling Co., Lebanon, Ill. Hominy Feed.....	10.00	8.00	3.75
Piel Bros. Starch Co., Indianapolis, Ind. Hoosier Gluten Feed.....	14.00	2.00	8.00
The Sugarine Co., Chicago, Ill. Sugarine Horse Feed.....	10.00	3.00	13.50

LAW TO REGULATE THE SALE OF COMMERCIAL FEED STUFFS  
IN OHIO.

As Amended April 8, 1908.

SECTION 1. Every manufacturer of commercial feed stuffs, and every person, firm or company that shall sell, offer for sale or expose for sale the same in this state, shall furnish with each car or other amount shipped in bulk, and shall affix to every package of such commercial feed stuffs, in a conspicuous place on the outside thereof, a plainly printed statement clearly and truly certifying the number of net pounds in the shipment, or in each package containing such commercial feed stuffs the name or trademark under which it is sold, the name of the manufacturer or shipper, the place of manufacture or the place of business of the shipper, and a chemical analysis stating the percentage it contains of crude protein (allowing one per centum of nitrogen to equal six and one-fourth per centum of protein), crude fat and crude fiber; and such printed statement shall further clearly and truly show the proportions of corn, oats, rye, wheat, wheat bran, wheat middlings, cotton seed meal, linseed meal, oat hulls, rice hulls, corn cob or other product contained in such commercial feed stuffs.

SECTION 2. Before any commercial feed stuffs shall be sold or offered for sale in Ohio the manufacturer, shipper, company, firm or person who causes it to be sold or offered for sale within the state, shall file with the secretary of the Ohio state board of agriculture a certified copy of the certificate referred to in Section 1 of this bill, and shall deposit with said secretary a sealed glass jar or bottle containing not less than one pound of the said stuffs, sold or offered for sale, accompanied by an affidavit that it is a fair average sample.

SECTION 3. The manufacturer, importer or agent of any commercial feed stuffs shall pay annually, on or before the first day of March, a license fee of \$25.00 on each brand, for the privilege of selling or offering for sale within the state, said fee to be paid to the secretary of the Ohio state board of agriculture, provided: that whenever the manufacturer or importer shall have paid the license fee herein required, any person, company or firm selling, or offering for sale, any commercial feed stuffs, or acting as agent for such manufacturer or importer, shall not be required to pay the fee named in this section. On receipt of proper application for license, with license fee, the secretary of the Ohio state board of

agriculture shall issue license for the current year; all licenses shall expire with the calendar year, December 31st.

SECTION 4. The term "commercial feed stuffs" as used in this act shall include linseed meal, cotton seed meal, pea meal, cocoanut meal, rice meal, gluten meal, gluten feed, dried brewers' grain, malt sprouts, hominy feeds, cerealine feeds, oats feeds, mixed feeds and all material of similar nature; but shall not include hay, straw, whole seed, the mixed meals made directly from the entire grains of wheat, rye, barley, oats, Indian corn, buckwheat and broom corn, wheat bran or middlings, not mixed with other substances, but sold separately as distinct articles of commerce, and pure grains mixed and ground together.

SECTION 5. All analyses of commercial feed stuffs, sold within the state shall be made by or under the direction of, the secretary of the Ohio state board of agriculture and paid for out of the funds arising from license fees provided for in Section 3 of this act. At least one analysis of each brand of commercial feed stuffs shall be made annually, if samples can be found in possession of agents, dealers, or consumers.

SECTION 6. Any manufacturer, company, firm, agent or dealer, who shall sell or offer for sale or expose for sale, any commercial feed stuffs in this state, without complying with the requirements of this act, or shall sell or offer or expose for sale any commercial feed stuffs which contain a smaller percentage of constituents than it is certified to contain, shall upon conviction be fined not more than one hundred dollars for the first offense, and not more than two hundred dollars, for each subsequent offense, and the offender in all cases, shall also be liable for damages sustained by the purchaser of such commercial feed stuffs; provided, however, that a deficiency of two per centum of crude protein or two per centum of crude fat, or an excess of two per centum of crude fiber, claimed to be contained shall not be considered as evidence of fraudulent intent.

SECTION 7. Any person who shall adulterate any kind of meal, ground grain, bran or middlings with any other substances whatever, for the purpose of sale, shall plainly mark or brand each and every package with a correct statement as to the proportions and kind of adulterant or adulterants used therein. The penalty for violating this section shall be a fine of not less than ten dollars or more than two hundred dollars for the first offense, and not less than twenty-five dollars or more than five hundred dollars for each subsequent offense.

SECTION 8. The secretary of the Ohio state board of agriculture, or any person deputized by him, is hereby authorized to draw from any package or bulk quantity of commercial feed stuffs exposed for sale, or found in possession of any purchaser, in any county of Ohio, a quantity not exceeding two pounds, which shall be for analysis, as provided in Section 5 of this act.

SECTION 9. All suits for recovery of fines, under the provisions of this act, shall be brought by the secretary of the Ohio state board of agriculture, in the name of the state of Ohio. All prosecutions under this act shall be governed by

Section 3718~~a~~ of the Revised Statutes of Ohio and said section shall control all such prosecutions.

SECTION 10. The secretary of the Ohio state board of agriculture shall publish, annually, a correct report of all analyses made and all licenses issued for the sale of commercial feed stuffs, together with a statement of all moneys received on account of license fees and all expenditures made in connection with securing samples, and having the same analyzed; and any surplus shall be placed to the credit of the agricultural fund.

The above is a correct copy of the law regulating the sale of Commercial Feed Stuffs in Ohio, now in force.



**PROCEEDINGS**

**OF THE**

**State Farmers' Institute**

**Held in Columbus, January 12 and 14, 1910**

**AND REPORT OF THE ANNUAL MEETING OF THE**

**Ohio State Board of Agriculture**

**Held January 13, 1910, with the Twentieth  
Annual Report of Farmers' Institutes**

**HELD IN OHIO IN 1909-1910**

**Under the Auspices of the  
Ohio State Board of Agriculture**

# Ohio State Board of Agriculture 1910

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## Officers

C. W. McFARLAND, President.

T. E. CROMLEY, Vice-president.

L. W. KILGORE, Treasurer.

A. P. SANDLES, Secretary, Columbus.

J. W. FLEMING, Assistant Secretary, Columbus.

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## Members

	Term Expires.
WILLIAM MILLER, Gypsum, Ottawa County-----	January 1911
C. W. McFARLAND, Mt. Gilead, Morrow County-----	January 1911
C. H. GANSON, Urbana, Champaign County-----	January 1912
JACOB DEAN, Chester, Meigs County-----	January 1912
P. G. EWART, East Akron, Summit County-----	January 1913
E. L. LYBARGER, Warsaw, Coshocton County-----	January 1913
J. A. BEIDLER, Willoughby, Lake County-----	January 1914
J. F. CROSS, Washington C. H., Fayette County-----	January 1914
T. E. CROMLEY, Ashville, Pickaway County-----	January 1915
L. W. KILGORE, London, Madison County-----	January 1915

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## Farmers' Institute Committee

T. E. CROMLEY,  
E. L. LYBARGER,

P. G. EWART,  
WM. MILLER.

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## Auditing Committee

J. A. BEIDLER,  
J. F. CROSS,

JACOB DEAN,  
C. H. GANSON.

---

## Grounds and Buildings Committee

C. W. McFARLAND,

A. P. SANDLES.

L. W. KILGORE,



REPORT

OF THE

Proceedings

OF THE

State Farmers' Institute

HELD IN THE

BOARD OF TRADE AUDITORIUM  
COLUMBUS

Wednesday, January 12,  
Friday, January 14, 1910



# PROCEEDINGS

## Annual Meeting Ohio State Farmers' Institute

### Columbus, Ohio, January 12 and 14, 1910

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The annual meeting of the State Farmers' Institute was held in the Board of Trade Auditorium, Columbus, Ohio, Wednesday and Friday, uary 12 and 14, 1910. The following is a full stenographic report of the proceedings:

The first session was called to order at 10 o'clock Wednesday morning, January 12, by Hon. A. P. Sandles, Secretary of the Ohio State Board of Agriculture, who spoke as follows:

Ladies and Gentlemen:—The State Board of Agriculture has spared no means or trouble in making this an interesting three days' session. The State Farmers' Institute today and Friday is supplemented by the State Plant Breeders' Association, which will render a program this afternoon, has made what we believe a good and profitable program to you all. What you do and say here will be recorded and the people of the state of Ohio will read your proceedings. I am sure that everyone here will feel that he has the liberty and the privilege of asking questions and participating in these meetings. You have that privilege. These meetings are in the cause of agriculture, its advancement and its betterment. Take hold, feel at home, because you are stockholders.

Now one year ago Dr. Miller was elected president of the State Farmers' Institute, but he has accepted work and a position in the new state of Oklahoma, and for those reasons he is unable to be here and was unable to help in preparing the program. Mr. C. R. Wagner, who was elected vice-president, will preside over this meeting, and I am sure he will be found affable and courteous to you all. In introducing him I presume the most of you have met him, shaken hands with him, and know his worth and his earnestness and the effort he has made in the cause of better farming and better conditions among farmers.

Now I have the pleasure of introducing to you your chairman, Mr. C. R. Wagner, of Hancock County, and I hope you will give him a hearty greeting as all good fellows deserve to have. (Applause.)

Music by the Angelus Quartet.

#### INVOCATION.

By Dr. Chamberlain.

Oh Lord, our Heavenly Father, we arise and bow our heads in adoration before thee, for Thou art the Creator of Heaven and Earth, and of all things therein. Ages upon ages ago Thou didst set the sun to shine in the sky when the

morning stars first sang together for joy, and ever since his rays have animated life here and given us heat. We come to thank thee for the wonderful provision thou didst make so long ago for all our wants, storing this wonderful world with all things necessary and gave to us, created in thine own image, the intelligence to use the mighty forces of nature in developing all rich material we know of for the good of mankind; and as we come to study how best we can do this, we ask for thy blessing upon us, to be with us in these meetings in behalf of the great agricultural interests so that the words of our mouths and emotions of our hearts and henceforth the deeds of our lives may be acceptable in thy sight, Oh Lord, our Strength and our Redeemer. Amen. •

#### ADDRESS BY PRESIDENT WAGNER.

Fellow farmers and farmers' wives and those in sympathy with us, and I suspect that includes pretty nearly all of those here this morning, or who are likely to be here through our Institute, I extend to you greeting. A hearty welcome awaits all.

Owing to a combination of circumstances and business moves, your worthy chairman and co-worker, Dr. H. P. Miller, will be absent, for which all of us are truly sorry because of the fact we shall miss his able guidance and that strong hand of his in the management of a gathering of this kind. It then devolves upon me, as vice-chairman, to preside over your deliberations here at this meeting for two days. I will say in passing that I fully appreciate the honor you have thus conferred upon me, and ask your indulgence during the sessions which are about to progress. The State Board of Agriculture and allied associations in arranging a program for this annual gathering of those interested in the movement of progressive agriculture, have spared no time and expense in bringing to you talent of the highest possible merit. Believing that in so doing much good can and will be accomplished.

During these deliberations our every move may not be in strict accordance with the best parliamentary authority, but I would assure you that the object at all times must be to get the most possible good out of the sessions. I would therefore solicit your indulgence and hearty co-operation to that end.

Since our last meeting in January, 1909, the secrets of another year stand revealed to us. To some it has brought success and to others failure. To some happiness and pleasure, to others sorrow and pain. Such we may always anticipate, as it is the common heritage of man.

It would seem superfluous to review at length the events of the year just closed, as they are still first in the minds of those active in the work. Upon the whole we can truly say it has been unquestionably a prosperous year for Ohio farmers. The crop production while not record-breaking in its proportions, yet we have no real reason to murmur or complain. The corn crop we still believe to be king among Ohio farm crops when we take into consideration the methods of the ultimate disposal of it on the best farmed farms. The state average is about thirty-nine bushels per acre as compared with forty in 1906.

Although the wheat prospects at the beginning of the year 1909 were not the most favorable, yet the harvest brought a fairly good quantity, quality and price. Other farm crops averaged very well, and with the accompanying high level of prices, brought a feeling of satisfaction and gladness to the producer. One exception, however, must be noted, and that is the apple crop, which might be classed as a failure when taken as a state. To the live stock farmer, possibly greater than any other, has the year 1909 dealt kindly, very kindly. With little

disease, comparatively speaking, and the high level of prices, seemed to be a combination that revealed the shining gold. And well may this be. It is far reaching in results. It is for the common good of all. "A man should not live for himself alone, but that the world might be better off for him having lived." Prof. Curtiss, of Iowa, at a recent meeting, is credited with having said that "Land mining is bad business and a large part of the feed raised must be consumed on the farms, making condensed and finished products. Live stock is the source of enduring wealth. The march of civilization has left a trail of poor soil behind it. Fertility has never been maintained without keeping live stock, and the region that will endure longest is the one where live stock is kept."

#### Prices.

While it is true that prices for all foodstuffs have ruled rather high, thereby increasing the cost of living to all and felt by the laboring classes especially, yet let us not forget that during the past prices have been on a much lower level. In fact, so low that it was the direct cause of many engaged in tilling the soil leaving it and entering into other business ventures. Then the cry went up from all over the land: "How shall we keep the people on the farms?" Time works surprising changes many times. An era of high prices has dawned. Nothing that I can imagine will turn the tide farmward so rapidly and so successfully as continued and increasing high prices for farm products. The continued remunerative prices for farm products have paid mortgages rapidly, have enabled farmers to make necessary improvements on farmsteads; have enabled them to breed and keep better live stock, have enabled them to surround themselves and families with many comforts, have sent farm land values up rapidly, have enabled the farmer to become investor in banks, manufacturing concerns and other business ventures, until he has become a resident of "easy street." I will venture the assertion that a large per cent. of the twenty-one billion dollars of bank resources behind the banks of this country are backed by farm owners. With this great change from dependents to a large extent, to an independent footing, has come that feeling of pride in our calling. We have more confidence in our business and ourselves, and as this state of affairs increases from year to year, prices must raise still higher. Let me say here that the signs of the times all point to a very bright future in agriculture—intelligent and scientific agriculture. The thinkers of the United States are and have been turning over and over the saying of J. J. Hill before the National Bankers' Association at Denver that "In the near future the United States would not only cease to be an exporting but become an importing country of foodstuffs." I am confident that this assertion is far-fetched. Anyone who has carefully studied the situation in its many phases, and from a practical standpoint, will concede that with sufficiently remunerative prices the farm crops of Ohio could be and will be doubled. There is not a person here today that has ever witnessed such a searching into agricultural problems as is going on all over the civilized world today. And from the momentum thus gained must and will come the solution of the problem of how to feed and clothe the people. Neither J. J. Hill nor his living progeny will need to borrow trouble along this line. I am optimistic. I have confidence in the intelligence of man; in his ability to solve these vexing questions that concern the future welfare of the race.

#### Future.

But now, brother farmers, it is up to you to work this out along practical lines. This is why we cheerfully support our agricultural colleges, our experi-

ment stations, our farmers' institutes and kindred institutions. With that object in view we should study political questions as they concern us, and not only study but cast our ballot on the side of honest government, honestly administered and at all times administered in behalf of the people, those who labor, the producer of wealth and not in the interest of the idle few. Let us by our voice and action help to scrape away the barnacles that only impede our national progress. Let us during these sessions and through the year just dawning so auspiciously, study as never before how to become a stronger people morally, intellectually and physically—a nation of giants as it were in human progress.

Honored friends, before I close I cannot but recall the fact that death has removed one of our number, a fellow worker, a man we all knew, a man honest, sincere, industrious, able and loved by all who knew him, Mr. J. Al. Dobie. I trust that the resolutions committee will remember this with a suitable resolution.

The President: ' I would like to say this session has been arranged in the interest of the State Plant Breeders' Association. This association has secured the help of men from the outside, men who are able to talk along these lines. This is really their session at this institute. The first we have is the "Plant Breeding Work of the Illinois Experiment Station," L. H. Smith, assistant chief of the Plant Breeding Department of the Experiment Station, Illinois.

#### **PLANT BREEDING WORK OF THE ILLINOIS EXPERIMENT STATION.**

By Prof. L. H. Smith.

(Illustrated.)

Mr. President, Ladies and Gentlemen:—I wish first to express to the Ohio Plant Breeders' Association my appreciation for their interest in our Illinois work, as manifested in their invitation to present this work at this meeting.

#### **Factors in Crop Production.**

As I have recently stated, there are a number of factors entering into the production of crops, some of which are controllable, some uncontrollable. The controllable factors may be summarized under three headings—feeding, breeding, care. It having been my privilege at the recent meeting of your Corn Improvement Association to discuss somewhat the first of these factors in its relation to the improvement of crops, let us turn our attention today to the second, and consider the factor of breeding.

In the breeding of plants we have one of the most powerful agencies at our command for the improvement of our farm crops, the importance of which we are just beginning in this country to appreciate.

It is my purpose to give you by use of the lantern pictures in a rather informal way a few of the results of the work with which it has been my privilege to be connected, hoping that these may serve to illustrate some of the principles involved in the breeding of plants as well as to indicate some of the possibilities for crop improvement lying in this field of endeavor.

#### **Variation in Individual Plants.**

In plant breeding we have to depend upon selection, and selection in turn depends upon variation. The first picture that I have to show is an example of

variation—an unusually interesting case which appeared suddenly and unexpectedly a few years ago in a study that was being made upon the treatment of alkali soil. In a series of pots treated with varying proportions of magnesium carbonate, an alkaline salt, there was planted a variety of spring wheat known as Minnesota No. 169. In the pots receiving the largest amount of alkali, the dose proved too strong for the wheat, with the exception of a single kernel. This kernel put forth a strong, vigorous plant bearing a good crop of grain, whereas all its neighbors made either only a sickly spindling growth, or died out entirely. Seed was saved from the exceptional plant, and it proved to breed true to this characteristic of being resistant to the poisonous effect of the alkali, and in the picture before you we have the third generation of offspring from that one remarkable plant, growing thriftily in the strongly alkaline soil alongside the little spindling, degenerate plants seeded from the ordinary wheat. Aside from the economic interest involved, this case furnishes a most interesting illustration of the fact that here and there among the plants of our fields, there exists these exceptional individuals—in this case, exceptional in its resistance toward alkali—in another case it may be resistant to the attack of disease, or to winter killing, or to drouth—in fact it may be exceptional in any particular desirable quality, and it is our task as plant breeders to seek out these exceptional variations and propagate them, and thus improve our strains of useful plants.

#### Variation in Corn.

Corn is an extremely variable plant, varying in many particulars, such as stalk, leaves, tassel and ear. Especially do ears vary in their productiveness. There is no way of telling from the appearance of a seed ear as to its productive capacity. Of two equally fine appearing ears, one may yield twice as much as the other, and as I say, we can tell absolutely nothing in regard to this except as we put the ears to an actual test as we do in our corn breeding plots.

In the picture before you, we have an illustration of this in the two rows of corn where each row is planted from a certain seed ear. Row 12 produced forty and one-half pounds of ear corn, and Row 13 produced eighty-three pounds as shown in the next picture.

#### Relation of Type of Ear to Productiveness.

It would be of tremendous importance if we could discover some correlation in the appearance of the seed ear and its yielding capacity, but thus far it has been impossible to find any such feature that will infallibly indicate the yielding tendency of a seed ear. After all, why should we expect to find so very much relation here? When we consider all the factors involved in yield, is it not probable that many other things, such as, for example, the development of the root system, might have a thousand times as much to do with determining the yield as has some little point in connection with the shape of the ear? But it is impossible to take into account all of these elements that may determine productiveness; so in the absence of such knowledge, why not make yield itself the criterion of selection as we do in the ear-row test, for after all, is not yield the thing that we are after?

#### Breeding for Quality.

In the improvement of our crops we may breed for quality as well as for quantity, and in this connection I would call your attention to what are prob-

ably the oldest corn breeding experiments in existence, in which selection has now been continued for fourteen years with the purpose of influencing certain qualities in the grain.

Probably no other crop is made to serve such a variety of uses as corn. More than a hundred different products of the various parts of the corn plant have been mentioned. In this connection is suggested the idea of special adaptation to these different purposes. In many cases the adaptation depends upon the composition of the grain.

In the next picture we have illustrated the composition of ordinary dent corn, showing the constituent parts in their relative proportions of one bushel.

In a bushel of corn there are about forty-five pounds of carbohydrates, which is mostly common corn starch. In the feeding of corn these carbohydrates supply the energy, and also to some extent, go to form the fat of the animal body. In the industries it is the material from which are made such products as glucose, gums, dextrin and alcohol.

The important constituent from the feeding standpoint, however, is the protein, and as you see, there is about six pounds of this essential nutriment in a bushel of ordinary corn. A very important commercial product is the oil, and it is interesting to see that there is approximately two and three-fourths pounds of oil in a bushel of shelled corn. The crude fibre, which is mostly in the outer hull or bran, amounts to about one and three-fourths pounds. This is the most indigestible portion. If we were to burn a bushel of corn, there would be about three-fourths of a pound of ash or mineral matter. This is also a very important constituent from the feeding standpoint, for much of it goes to the formation of the bone and it also plays an essential role in the physiological processes of the body.

This ash is also interesting from the soil fertility standpoint, for it represents the amount of mineral matter that is drawn from the soil in the production of every bushel of grain. If you take off sixty bushels of corn to the acre, you remove sixty times this quantity of plant food from every such acre of land, and it is evident enough that you cannot keep up such a practice indefinitely without restoring to the soil in some form or other these essential elements of fertility.

#### **Effect of Selection Upon Chemical Characters of the Grain.**

**Purpose of Increasing the Protein**—In the nutrition of man and beast, protein is the most expensive nutrient. Of all our American foodstuffs corn is the cheapest, because of its economical production. But because corn does not contain sufficient protein for most purposes of feeding, it must be reinforced by other more expensive foodstuffs in order to obtain the proper ratio of this important nutrient. It is from these considerations that farmers, and especially stock feeders, recognize the importance of breeding corn for increase of protein content.

**Purpose of Decreasing the Protein**—On the other hand, there is a demand from the manufacturers of those products which are derived from the starch of corn, such as glucose, gum, dextrin, syrup and alcohol, for a corn having a large proportion of carbohydrates and not so rich in protein. The practical effect of decreasing the per cent. of protein is to increase the per cent. of starch; therefore, for such purposes there should be a place on the market for corn which is bred for decrease of protein content.

**Purpose of Increasing the Oil**—The oil of corn has in recent years found such a wide commercial use that under the present market conditions, it has become,



pound for pound, by far the most valuable constituent of the grain, and whereas, formerly in the glucose factories and corn mills the germs containing the oil were almost a waste product, there is now an actual demand on the part of these industries for corn which is richer in oil. It is proposed to meet this demand by breeding corn for increase of oil content.

**Purpose of Decreasing the Oil**—There is also a practical use for corn with a low oil content. It has been found by investigation that in feeding swine, the oil in the corn tends to produce a soft, flabby quality of flesh, which is very undesirable, especially for our export trade, where the demand of the market is for a hard, firm product. A remedy for this lies in the reduction of the oil content of the corn which is fed. Thus here we have very important practical object for breeding corn for decrease of oil content.

These special purposes mentioned for which corn is being improved suggest the possibility of many others demanded by the various industries which utilize the corn crop and which require different qualities in it.

In 1896 the Illinois Experiment Station took up the proposition to influence the chemical composition of the corn kernel by selection of the seed.

The plan proposed was to breed for four different purposes, namely, first, increase of protein; second, decrease of protein; third, increase of oil; fourth, decrease of oil; the selection being based upon the analysis of individual ears of a single variety. The ears thus selected for the several purposes were planted together in isolated breeding plots by the well known ear-row method. From each of these plots, selection has always been kept up in the same general manner by analysis of individual ears.

#### Breeding to Influence the Protein Content.

An outline of the results obtained in the breeding for increase and decrease of protein content may be seen in the following table:

INCREASE AND DECREASE OF PROTEIN.

Year.	High protein plot average per cent. in crop harvested.	Low protein plot average per cent. in crop harvested.	Differences between crops— per cent.
1896 -----	10.92	10.02	0.00
1897 -----	11.10	10.55	0.55
1898 -----	11.05	10.55	0.50
1899 -----	11.46	9.86	1.60
1900 -----	12.32	9.34	2.98
1901 -----	14.12	10.04	4.08
1902 -----	12.34	8.22	4.12
1903 -----	13.04	8.62	4.42
1904 -----	15.03	9.27	5.76
1905 -----	14.72	8.57	6.15
1906 -----	14.26	8.64	5.62
1907 -----	13.89	7.32	6.57
1908 -----	13.94	8.96	4.98

The table gives the average protein content of the crop produced on each plot each generation, thus giving a good general view of the progress of the work.

A glance at the figures shows that there has been great response to the selection in both directions, so that the general effect has been such that we have been able to produce out of a single variety two strains of corn, the one of which contains more than half again as much protein as the other.

It is important to notice in passing that there has been at times a very pronounced seasonal influence upon the protein content. For example, the high protein tendencies are brought out very distinctly in the results for the years 1901 and 1904. On the other hand, 1900 and 1907 were years favorable to low protein.

#### Breeding to Influence the Oil Content.

Even more striking are the results obtained in the breeding to influence the oil content as shown in the more regular and uniform response to the selection and in the greater proportionate changes produced.

The following table gives the record of this work:

INCREASE AND DECREASE OF OIL.

Year.	High oil plot average per cent. in crop harvested.	Low oil plot average per cent. in crop harvested.	Difference between crops— per cent.
1896 -----	4.70	4.70	0.00
1897 -----	4.73	4.06	0.67
1898 -----	5.15	3.99	1.16
1899 -----	5.54	3.82	1.82
1900 -----	6.12	3.57	2.55
1901 -----	6.09	3.43	2.66
1902 -----	6.41	3.02	3.39
1903 -----	6.50	2.97	3.53
1904 -----	6.97	2.89	4.08
1905 -----	7.29	2.58	4.71
1906 -----	7.37	2.66	4.71
1907 -----	7.43	2.59	4.84
1908 -----	7.19	2.39	4.80

Here it is shown that the general effect has been to produce out of this same variety two other strains of corn, the one of which is now practically three times as rich in oil as the other.

It is of especial interest to observe that both in the oil and in the protein breeding the limits appear to have been reached. In the case of the high protein the high percentage in the crop of 1904 has never since been attained. In the low protein plot the minimum percentage thus far obtained was in the crop of 1907. In the high oil strain there was a drop in the percentage of the last year's result, but in the case of the low oil the extreme point is represented in the last year. On the whole, however, if we consider the last four or five generations, the results appear to be fluctuating around certain points varying back and forth with the season and soil conditions.

On account of these environmental influences, it cannot be decided yet

whether there may not still be further advance possible in some of these directions, and there is still as much interest as ever, if not more, in the continuation of these experiments along the same lines.

#### **Effect Upon the Structure of the Kernel.**

It is interesting to find that the selection for the various chemical characteristics of the grain has resulted in modifying the physical structure of the kernel.

Selection for high protein has developed a type of kernel having a relatively larger proportion of the horny material, the soft, white starchy part being relatively less prominent, whereas in the type of kernel resulting from low protein selection, this condition is reversed and here the soft starchy part predominates. In the photograph representing this, the kernels on the left were taken from an ear analyzing fourteen and ninety-two hundredths per cent. protein, while those on the right are from an ear which contained only about one-half as much or seven and seventy-six hundredths per cent.

In the case of the oil selection the principal effect has been upon the germ. Following the fact that about four-fifths of all the oil in the kernel resides within the germ, the selection for high oil has resulted in a type of kernel having a relatively larger proportion of germ, while the low oil selection has produced a kernel whose germ occupies a relatively small proportion of its bulk. These relations are brought out distinctly in the photograph showing kernels from high oil and low oil ears, on the left a high oil ear testing six and eight hundredths per cent., on the right from a low oil ear testing three and sixty-four hundredths per cent. of oil.

#### **Effect Upon the Yield.**

One of the first questions to be considered from the practical standpoint is, of course, the effect that selection for these various characteristics has upon the productiveness.

In our comparative yield tests that we have made of these four different strains there have been some irregularities, and it is difficult to draw definite conclusions in all respects. The maximum yield has varied among the different strains. In some years the low protein strain has given the highest yield; in other seasons, the low oil has been the heaviest yielder. But the lowest yield of the four strains has always been produced by the high protein corn, so that it would seem that a high protein content and the highest productivity do not go together.

If, however, we consider the production of protein per acre, our high protein corn, by reason of its richness in this constituent, produces more pounds of protein per acre than an ordinary variety even when the latter is yielding more grain.

On the whole, however, it has been quite gratifying to find that we have been able to maintain the yields in these strains as well as we have when we take into account the intense selection which they have undergone for other special characteristics which have been given first consideration.

#### **Effect of Selection Upon Physical Characters of the Plant.**

Seven years ago two lots of ears were selected from an ordinary corn field, one of these lots representing ears growing high on the stalk, and the other those borne low down on the stalk. These two sets of ears were planted in separate

breeding plots, and selection for high ears and for low ears from the respective plots has been made each year since. The general result of this work is shown in the following table:

**.BREEDING FOR HIGH EARS AND LOW EARS.**

Year.	Average Height in Inches.		
	High ear plot.	Low ear plot.	Difference.
1903 -----	56.4	42.8	13.6
1904 -----	50.3	38.3	12.0
1905 -----	63.3	41.6	21.7
1906 -----	56.6	25.5	31.1
1907 -----	72.4	33.2	39.2
1908 -----	57.3	23.1	34.2
1909 -----	64.3	25.3	39.0

Here again as in the case of the selection for composition of grain, there has been a gradual response so that by breeding this variety in opposite directions two strains of corn have been produced, in one of which the ears are now borne about three feet higher on the stalk than in the other strain.

Incidentally, it is of interest to notice in this connection the correlation existing between the height of ear and the total length of plants, the total number of internodes, and the average length of internodes. Selection for high ears has produced a taller, later maturing plant than that resulting from low ear selection; and interesting enough from the practical standpoint, the yields from these two strains are thus far about equal.

Many of our corn growers are coming to the belief that as a result of their ambition to produce a large ear of corn, the time of maturity has been prolonged at the detriment of some of our best varieties. This is doubtless true, but the lesson brought out by these experiments seems to me is that we should pay as much attention to the plant that produces the ear as we do to the ear itself, for it is the habit of the plant that determines maturity, and when we select our seed corn from the crib, rather than from the standing stalks, we lose the tremendous advantage coming from a knowledge of the characteristics of the mother plant. There are other important points involved in the method of selecting seed from the field rather than from the crib, but for their consideration I need only to refer you to the publication of Prof. Williams, Circular No. 71, of the Ohio Experiment Station.

**Selection to Influence Declination of Ear.**

Another character that has likewise responded in a striking manner to seed selection is the declination of the ear at the time of maturity. The details of the plans and the early results of this work, together with those of the preceding experiments, will be found in Bulletin 132, of the Illinois Agricultural Experiment Station.

The results now cover six generations, and they appear in outline in the following table:

**BREEDING FOR ERECT EARS AND DECLINING EARS.**

Year.	Average Angle of Declination From Stalk.		
	Erect ear plot degrees.	Declining ear plot degrees.	Difference degrees.
1904 -----	42.0	45.0	3.0
1905 -----	62.2	117.1	54.9
1906 -----	49.5	76.2	26.7
1907 -----	42.3	81.6	39.3
1908 -----	46.0	88.5	42.5
1909 -----	31.9	110.7	79.5

We observe from these results that, with the exception of 1905, which appears in this respect to be an abnormal season, there has been a steady progressive response to the selection until finally after six generations the average difference in the angle amounts to almost eighty degrees.

The practical thing desired in this case is the declining ear, the advantage being found in the better protection from rain, as well as in greater convenience in harvesting. It is an interesting fact that we actually count more rotten and moldy ears in our erect ear field than in the declining ear field, and the difference in this respect is greater in the seasons having the most rain.

**Fertilization Process.**

The next few pictures will represent some of the principles of the pollination and fertilization of the corn plant.

As those of you who are engaged in this work are well aware, the breeding of corn is beset with extra complications because of the fact that this plant belongs to that class of plants known as "open-fertilized" as distinguished from "self-fertilized." The tassel is made up of the male flowers of which the essential organs are the anthers which produce the pollen. The female flowers are in the ear and the silks are the portion of these flowers whose function is to receive the pollen. When the anthers are ripe, they burst and the pollen grains are scattered as a fine yellow dust by the wind. An average corn plant is said to produce eighteen millions of these pollen grains. As they float through the air, some lodge upon the silk. In the fertilization process the pollen grain germinates, throwing out a little tube which in its growth gradually finds its way down the length of the silk, finally coming into contact with the reproduction cell of the kernel. Then follows the fusion of a tiny quantity of the substance from this cell and from the pollen cell, and as a result of this fusion the kernel develops. If for any reason this fertilization fails to take place, there is no development of the kernel. Thus in a poorly filled ear, either no pollen reached the silks, or for some reasons conditions were wrong for the fertilization process to proceed properly.

### **Inbreeding.**

As stated above, corn is by nature a cross-fertilized plant and inbreeding appears to have a decidedly detrimental effect upon the yield and vigor. In an experimental plot where we have forced inbreeding artificially, that is, by collecting the pollen from a certain plant and applying it to the silks of that same plant and using only seed produced in this way, the yield has been so reduced as to give only thirty bushels per acre as an average of the last five years, in comparison to sixty-four bushels from a check plot likewise controlled by artificial pollination, but kept continually crossed during this same time. Compare in the pictures the backward stunted growth in the inbred plot with the vigorous growth in the cross-bred plot.

It is not known how closely we may safely approach absolute inbreeding, but it is generally recognized that in the breeding plot where we have closely related ears, there is this element of danger to consider and in order to avoid it, various systems have been devised. In our Illinois method in our ear row plots, we detassel alternate rows, taking seed only from detasseled corn. This prohibits all inbreeding and close breeding so far as the current generation is concerned. By use of a comparatively large number of ears and by paying attention to the arrangement of planting in distributing the closely related ears about over the plot, we prevent further the tendency to inbreed. Professor Williams of the Ohio Station, has devised another very ingenious system to overcome inbreeding, the details of which I need not give here.

### **Breeding for Barren Stalks.**

In a third plot which we have been controlling by artificial pollination, we have another very interesting experiment. In this case we have always collected the pollen from barren stalks. Although this has been under way for seven generations, the results show no marked detrimental effect either upon the yield or the number of barren stalks produced. That is to say, by breeding as intensively for barrenness as it is possible to do in using barren sire plants, we seem to get no hereditary tendency in this direction, thus indicating that barrenness in corn is a matter influenced by environment rather than by heredity.

It is my hope that this presentation of some of the things that have been accomplished in the breeding of corn will illustrate the principles involved, and suggest something of the possibilities in the improvement of our field crops in general.

Corn, by reason of its nature, has always enjoyed more selection than the other field crops. Large fine ears would naturally be given the preference in planting. Thus in a haphazard sort of a way, corn has probably always received more or less selection based upon individuality, and yet we are able to see the marked improvement resulting from the more systematic breeding which has been practiced only within a dozen years. But how many are there who have paid any attention whatever to the individual plants in selecting the seed of our small grains, grasses and forage plants? Very few, indeed, have taken into account the individual head of wheat, of oats, or of clover. Yet the same general principles of heredity operate in these plants as in corn and individual variations exist just the same as in corn. There is just as much sense in demanding that oats and wheat be sold in the head as there is that corn be sold in the ear. And there is just as much importance in testing these heads of oats and wheat separately as in testing ears of corn in separate breeding rows.

The importance of adaptation of plants to their environment is a matter

that is generally recognized and needs no argument here. But in this connection I think we often fail to appreciate the great diversity of soil and climatic conditions that may actually exist within the borders of a single state. I speak of this as indicating the great field of opportunity for men who will devote their time and ability to the improvement of the various field crops. You have here a small plant breeders' association. There are doubtless opportunities for many times this number of such honest earnest men who will devote themselves to the improvement of the crops for their various localities, and by so doing not only reap the reward which must follow persistent patient endeavor along this line, but at the same time be rendering a real service to their community and to the world.

#### Discussion.

Question: In the ear-row breeding plot where you showed the two rows No. 12 poor and No. 13 good, would you save seed from the row 13?

Answer: We would save seed from only the highest producing rows.

Question: Is there not a chance of pollen going across from row 12 to 13?

Answer: Yes, that is one of the things we have to contend with, but we depend upon our system of selection to overcome this evil by the gradual elimination of such undesirable blood.

Question: In regard to rich and poor soil, what would be the effect on the chemical composition of the corn?

Answer: It has been found elsewhere that the protein content of the grain responds to the application of nitrogen to the soil. In these experiments, however, soil influence has been controlled by alternating the location of the high and low protein plots. Also we have checked up this matter further by planting high protein and low protein side by side in the same hills, and have still found the marked difference in the protein content of the crop in accordance with the seed planted.

Question: Suppose we have a season where the corn does not mature, what will be the effect upon the composition?

Answer: If you mean by not maturing, an incomplete deposition of carbohydrates or starch, we have the effect of increasing the proportion of protein.

Question: Was this white or yellow corn?

Answer: It was a white variety known originally as Burr's White that was used in these experiments.

Question: Can you breed high protein and high oil together?

Answer: Yes, the two characters are somewhat correlated. Increase in protein means an increase in oil and vice versa.

Question: In regard to the breeding for high and low ears, what about the production for ensilage?

Answer: Of course the larger stalk that goes with the high ear

would furnish more fodder, but a large proportion of this is the coarse material composing the base of the stalk which has little feeding value.

Question: In regard to the breeding for the declination of the ear, does not the variety have something to do with it?

Answer: Very likely it does, but in these experiments we started originally from the same variety.

Question: In regard to breeding for two ears to the stalk, do I understand that it is possible to get an increase by two ears?

Answer: We do not know for certain, although it seems rather probable that we should. We have not proceeded far enough as yet to be able to say. We must first "create" a two-eared variety, and then test it out in comparison with the single-eared type, and the work is thus far only in the process of this "creation."

Mr. Cook: I would like to ask whether it is not possible to raise protein more cheaply in other crops than to raise it in corn?

Answer: It would be difficult to give a complete answer in a single sentence. This involves a large question in economics. It might be more economical under certain conditions where under others it would not. For example, if you can grow alfalfa, and do it, it would probably not pay to increase the protein in your corn. On the other hand, if you are paying out your good cash for bran or other concentrates, it might be cheaper to produce your protein in your corn. These experiments of course do not pretend to answer that question, but the results do show that it is possible to increase the protein content of corn if it is desirable to do so.

Mr. Doddridge, of Greene County: Does the professor know any connection between the yield and the height of ear on the stalk?

Answer: I believe that I stated that thus far in the experiments mentioned there has been no very marked effect on the yield. This past season our low-ear strain was slightly in the lead in this respect.

Question: Which ripen earlier?

Answer: The low-ear strain is now several days in advance in maturity.

Mr. Cook: In handling corn with a machine, is not the machine likely to knock off a greater number of ears in the low-ear corn than on the average high corn?

Answer: That might be true. I suppose we can get the ears too low. The experiments show that we can have them just about where we want them.

Mr. Stabler of Maryland: Our Maryland station has had some results which seem to show a relation between the size of the germ and the strength of the young plant. I would like to know whether the Illinois people have found a relation between the size of the germ and the yield.

Answer: We have found no such relation. In comparative germi-



nation tests our high-oil corn starts off about twenty-four hours in advance of low-oil kernels, but this difference disappears as soon as they pass the seedling stage, and as a matter of fact, our low-oil corn has usually yielded higher than the high-oil strain.

Question: I would like to know whether in cutting ensilage we would get more protein in well ripened corn, or in corn cut rather green.

Answer: If cut very young, there would probably be a higher relative proportion of protein than in ripe corn, but not as many pounds per acre. However, unless there is a considerable difference in the stage of maturity, we should expect no very great difference in the amount of protein.

Mr. Field: I would like to ask if in a few more years in the breeding of low ears, he thinks he could get the corn down to where the potatoes grow? (Laughter.)

Answer: I do not undertake to set any limitations to what we may accomplish by breeding.

Question: At what distance is there likely to be mixing of varieties brought about by the pollen?

Answer: That depends of course upon the direction and strength of the wind. I think that from a quarter to a half mile is usually practically a safe distance, but would prefer to plant farther apart than this if possible.

Address.

#### **TIMOTHY BREEDING.**

By Prof. C. V. Piper, Washington, D. C.

Mr. Chairman, Ladies and Gentlemen:—I assure you I am very glad to be here today and give you a brief talk on timothy breeding. We have recently undertaken co-operative work of this kind with the Ohio Experiment Station, and I want to enlist your interest and sympathetic support in the work. If what I have to say will do this, I will be very glad indeed. I do not want to take up too much time on this subject, so I have written about a twenty minutes' address, and then I will show you a lot of slides.

Timothy, as is well known, is by far the most important hay grass grown in the United States. On the other hand, it is a grass of only minor importance in Europe. As a hay plant, timothy was first cultivated in the United States, and there is a widespread but erroneous idea that it is an American native. The authentic facts of its history are briefly as follows: It is first mentioned in publication by Dr. Jared Eliot, of Killingsworth, Conn., in 1747, in his "Essays on Field Husbandry." Eliot says the grass was first found in a swamp at Piscataqua, N. H., by one Herd, who propagated the same. Its culture was carried into Maryland prior to 1811, probably about 1760, by Timothy Hanson, and was known for a time as Timothy Hanson's grass. Hence, we have timothy as the common name of the grass, while in New England it is still called Herd's grass. Seed was sent to England as early as 1747, and we now export there about two million pounds every year.

For some reason not altogether clear, the common commercial hay grass of England and other European countries is mainly rye grass (*Lolium*). This prefer-

ence of the Europeans for rye grass over timothy, and the reverse preference in this country, may be, and probably is, to a considerable extent a matter of prejudice, though there is reason to believe that the rye grass is better than timothy in Europe, while there can be no question that timothy is by far superior to rye grass in most parts of the United States, especially the northeastern quarter.

#### **Why Timothy is so Important.**

In view of the fact that there is a large number of grasses well adapted to the northeastern quarter of the United States, it is desirable to have a clear understanding as to why timothy is practically the only hay grass grown. The answer to this may be made very brief. From a grower's standpoint, the advantages of timothy are its satisfactory yields, the long period during which it may be cut, the relative ease of curing, the excellent seed habits, and the fair amount of aftermath that can be utilized as pasture. From a feeder's standpoint, timothy is an almost ideal horse feed, especially for city horses, on account of palatability and easy digestibility. It is relatively not so valuable for other animals as for horses. From a grower's standpoint, perhaps the chief objection against the grass, at least in some states, is its great tendency to become foul with weeds, especially with oxeye daisy and white weed. The reason for this is that these two weeds ripen their seed with timothy, so that it not only becomes mixed with the timothy seed, but sufficient quantity is also scattered to keep the ground filled with weed seeds. There are two ways in which this objection can be satisfactorily overcome. One of these is late summer or fall seeding alone on well prepared ground. The other is to grow at least occasionally a mixture of tall oats grass, orchard grass and alsike clover. This mixture matures before the weeds have ripened any seed. Hence the land becomes clean, comparatively so at any rate.

#### **How to Increase the Timothy Crop.**

Generally speaking, there are four methods by which any farm crop may be made to give an increased yield. These four methods are: First, better tillage; second, better use of fertilizers; third, better rotations; fourth, better varieties. It is the last item which particularly concerns me today, and it is the only method by which the yield can be increased at practically no expense to the grower. The enormous progress that has been made in developing varieties of corn for increased yield during the last few years is perfectly familiar to you, especially as your own Professor Williams has been one of the prominent leaders in this type of work and exceedingly successful in his results. The great results to be reached by breeding alone has also been exemplified in other crops, notably cotton, tobacco, and to a less extent in the small grains. Until within a few years, the idea apparently had not occurred to anyone to improve our hay grasses in the same way, although the fact has long been known that in all of our cultivated grasses there is great diversity. Is it possible, out of these enormously diverse forms, varying in size and vigor, to select out the best and thereby increase the yield without additional expense? Theoretically, there should be no difficulty in doing this.

#### **History of Timothy Breeding.**

The first actual attempts, however, to improve timothy by selection, were inaugurated by Dr. A. D. Hopkins at the West Virginia Experiment Station in 1898, which work he continued for five years, publishing several contributions to the subject. In 1903, Dr. Hopkins turned over all of his selections to the

Department of Agriculture, which since has been pursuing extensive investigations along the same line. In addition to the work with timothy, considerable has also been done with other grasses, notably orchard grass. In 1905, similar work was inaugurated by Prof. T. H. Hunt at the Cornell Experiment Station, and has been vigorously prosecuted since. Some work of the same type has been conducted at the Minnesota Experiment Station for several years. In Europe, breeding work with grasses was inaugurated by Nillson, at Svalof, about six years ago. Beyond some preliminary notes pointing out the enormous number of forms existing in the several grasses investigated, nothing definite yet seems to have come from this Svalof work. In England, considerable breeding work of late years has been done with grasses, notably the rye grasses, of which English seed firms now offer a number of improved strains. The most important work of this type is that conducted by the Garton brothers.

The varieties turned over to the Department of Agriculture by Doctor Hopkins in 1903, numbered about thirty. In each case they represented the vegetative progeny of individual plants selected by Doctor Hopkins, his method being to choose the individual plants out of fields, pastures, roadsides and other places. The three varieties which he regarded as the most valuable were "Extra Early," which we have since renamed "Hopkins," a very early variety that matures its seed at least two weeks in advance of ordinary timothy; "Stewart, or Stewart Mammoth," a very large and vigorous variety; and "Pasture," characterized by great growth of aftermath, developed from a single plant that had persisted in a very old pasture. From the work which Doctor Hopkins had done with these three varieties, as well as the results of our preliminary trials, we were induced to grow seed of them in large quantities so that the varieties could be tested out extensively. This was done and the fields planted in 1907. These experiments were conducted in the states of New York, Ohio, Wisconsin, Iowa, Washington and Virginia. In the meantime, some experiments had been performed that led us to feel somewhat dubious regarding the wisdom of the plan pursued. Arrangements were made in 1907 by which we exchanged with the Cornell Experiment Station vegetative progeny of ten or twelve of our best varieties, receiving from the Cornell Experiment Station similar material of their ten or twelve best varieties. The results of this were rather surprising. At the Arlington Experimental Farm, near Washington, all of the Cornell varieties proved to be decidedly inferior to our selections, and strangely enough, the Arlington varieties proved inferior at Cornell. This has led us to believe that timothy breeding, like corn breeding, will have to be a comparatively local matter, and yet it may prove that certain varieties of timothy like certain varieties of corn will maintain their excellence over a wide area. The result of the large plots of the three Hopkins varieties planted in 1907 in general were not very encouraging. In all cases these were compared with ordinary commercial seed, and in no case did we find a very pronounced superiority, though in no case inferiority. From the standpoint, therefore, of selecting out in one place improved timothies that will be adapted to the whole United States, there seems to be but little hope. On the other hand, there is abundant evidence to show that the improved varieties maintain their high superiority where originated, and we, at present, believe that the correct principle in selecting timothy is to select it for the immediate region in which it is to be grown.

#### The Nature of the Timothy Plant.

From a breeder's standpoint, timothy and other grasses are comparable most closely with corn. Practically all of the hay grasses are wind-pollinated; that is,

the pollen is light and, therefore, carried considerable distances, while the stigmas are feathery and readily catch the pollen. Very early in the morning when there was no perceptible breeze so that the leaves of the trees were perfectly still, I experimented by striking a timothy plant. The pollen floated through the air for at least twelve feet before touching the ground, which will give some idea of the distance it will move when there is a perceptible motion of the air. Nevertheless, in our plant-to-row tests of timothy, we find in general that the rows are comparatively uniform, though in some cases there is striking diversity. With the grasses with looser panicles, like brome grass and redtop, the diversity in the plant-to-row tests is very much greater, apparently due to the fact that the loose-panicked grasses being easily affected by movements of the air cross-pollinate to a greater extent. This constant cross-pollination of the grasses makes it very difficult to obtain pure strains, and practically impossible to maintain them absolutely pure, not only because volunteer timothy occurs on every farm, but also because the pollen is blown for considerable distances from roadside plants or neighboring fields. I might here state that the three selections of Hopkins which I have discussed, were propagated by him vegetatively, and, therefore, absolutely true, until a considerable amount of seed was obtained. It was such seed that we used to plant large plots to secure greater quantities of seed. In these fields we noticed considerable diversity, and this was to be expected, because the great majority of individual plants are really crosses between two different individuals and not self-pollinated. Therefore, in accordance with Mendelian laws, we would expect the seed progeny of such individuals to show diversity, which is practically always the case. In our experimental work we have many times obtained seed by bagging or isolating a plant, in this way getting self-pollinated seed. In some cases, this will breed perfectly true, in other cases break up, depending on whether the mother plant itself was a pure strain or a cross. On account of these difficulties, we have abandoned as impracticable the idea of obtaining and maintaining perfectly pure strains. Our present method of selection is to get the seed of the plant selected and then transplant the plant itself at the head of the row, the remainder of which is sown with its own seed. We thus have for comparison the parent plant and its progeny. With careful study and good judgment, the best of these are then selected and grown in plots to obtain comparative yields. While in none of these cases do we have a perfectly pure strain, yet practically without exception an excellent parent gives excellent progeny, and we feel that this is the really practical way to develop improved timothies. It is not a method by which one can obtain and maintain indefinitely a pure strain, although selection to the ideal type would constantly approximate that.

In beginning our work here in Ohio, we have already started with five hundred plant-to-row tests. These five hundred plants consist of a considerable proportion of the numerous selections which have been made at Arlington Farm, Virginia, and at Pullman, Washington. This year we will at least double this number, including many local selections, and obtain for comparison as many as possible of the selections made by others. Out of this enormous number we expect to choose not over twenty or thirty for the purpose of growing in plots to obtain yield. Right here I wish to call attention to a practice that has been employed by some breeders in selecting timothies that we believe to be erroneous; that is the idea that the yield of the individual plant will be indicative of a yield of a plot or field. This by no means follows. Some of our selections stool inordinately and, therefore, have a large number of stems. The yield of such a plant is thus greater than the yield of a variety having only a few stems, even if in the latter case they be twice as tall as the former. As a matter of

fact, in seeding, timothy seed is sown so thickly that there is no need, and perhaps no desirability, of great stooling power. What is needed to increase the yield is vigor and height and leafiness, together with heavy seed production. Our selections now are made principally from the viewpoint of height, leafiness and large uniform heads, combined with only moderate stooling power. While it may seem at first sight that selecting for yield means undue coarseness, I think there is nothing here to fear. Even in some of the irrigated sections in the West where timothy grows to the height of six feet, and is, therefore, far coarser than one often sees in the East, I have never heard of the hay being scaled down on account of coarseness, nor do I think that any degree of coarseness that could be brought about by selection would result in scaling down the grade. As a matter of fact, when one fertilizes heavily or otherwise grows large crops of timothy, a similar coarseness is secured.

Since the selection work was done by Doctor Hopkins, and subsequent to the beginning of the work at Washington and Cornell, a new factor in timothy breeding has arisen. I refer to timothy rust. This first appeared in breeding plots at Arlington Farm in 1906, and was so destructive that some of the Hopkins varieties were entirely destroyed. Recent investigation has indicated that this rust is now abundant throughout the Atlantic states and occurs westward to Iowa and Minnesota. As yet, however, it is not abundant west of the Allegheny Mountains. In the four years that this has been present in our breeding plots, it has been more or less prevalent each year. One very noticeable fact is that some varieties are very badly attacked, even to being destroyed, while others are nearly, if not quite, immune. We are not sure that we yet have any variety that is absolutely immune, though a number of them approach this. Since the occurrence of this disease, our selections have also been made with due reference to it, as there is no question that this rust will extend eventually over the whole timothy region, and at least in certain seasons become destructive. It is very closely related to the red rust of wheat, but is considered by most botanists a distinct species or at least a subspecies, though recently it has been found that it can be transferred from timothy to wheat and vice versa, though with great difficulty. The suggestion has been made that it might be due to timothy rust that timothy is not a more important grass in Europe. There is no direct evidence, however, to support this suggestion. In view of the fact that all degrees of resistance to this rust exist in timothy, it is practically certain that we shall obtain varieties in which this disease will cause but little damage at most. If timothy is to maintain its superiority as the hay grass in the United States, we must obtain such a variety. Otherwise, farmers will turn to other grasses.

#### Variability in Timothy.

In recent years we have taken very full notes on all of the timothy selections which we are growing. Briefly, those variations may be grouped in the following categories: First, earliness; second, height; third, coarseness; fourth, number of leaves to the stem, varying from five to twelve; fifth, breadth of leaves, varying from narrow to very broad; sixth, shape and compactness of the head; seventh, size of the head; eighth, erectness of head; ninth, color of the stamens; tenth, character of the stem, this in some varieties remaining evergreen; eleventh, rust resistance; twelfth, amount of aftermath. As before stated, we are at present emphasizing particularly the matters of height, leafiness and rust resistance so as to get maximum yield. We also have considerable confidence in the very early varieties of timothy, as a number of these permit of being cut a second time. Another point that is receiving consideration is the

amount of aftermath, as this adds to the value of the pasturage. The matter of securing a purely pasture variety of timothy we have practically abandoned, as other grasses meet this need much better than timothy.

In regard to the work which we have inaugurated at New London in co-operation with the Ohio Experiment Station, our object will be to select as promptly as possible the best varieties, then to grow quantities of seed and put them at once in the hands of the best farmers of the state for comparison with ordinary commercial timothy. We feel as confident as ever that the best varieties thus selected will outyield the ordinary mixed timothy by from twenty to twenty-five per cent. The importance of this can readily be seen when we remember that the value of the hay crop in Ohio for 1908 was forty million dollars, and certainly at least half of this was timothy. In this work we shall not endeavor to get absolutely pure strains, as that is not practicable, but to put out high yielding strains which, notwithstanding accidental admixtures in the field and otherwise, will maintain their superiority for three or four generations at least. The breeding of timothy is bound to be a continuous process, but by no means an expensive one, as from a single selected plant it is easily possible to grow by the end of the second year twenty to forty pounds of seed. If our anticipated results are realized, the matter of growing seeds of improved timothies will probably in a large measure be taken up by progressive farmers in the same way that the growing of seed corn has been. The matter is one of tremendous agricultural import and we propose to make a thorough demonstration of its possibilities, which is now the great thing required. We hope to complete this demonstration in the state of Ohio within the next four years, pushing it as rapidly as possible in the light of the experience we have gained.

In this work we want to enlist the interest of all Ohio farmers. If it succeeds it means a great deal to the state, as well as to the whole country. The greater part of the cost is being paid by the Department of Agriculture, and because we have all confidence in its successful outcome. That your own Experiment Station is co-operating is direct attest to its belief in the work.

Following his address, Professor Piper gave illustrations of a large number of the most striking types of selected timothies; maps showing certain peculiarities in the distribution of timothy, and tables of statistics showing the value of this crop in the different states.

Mr. Stabler, of Maryland: I was very much interested in what you had to say about that test of varieties of timothy at Arlington, and as I live not very far from there I would like to know whether you find in commercial timothy seed it is better to buy seed grown in nearly the same latitude or whether it is just as well to get Northern seed?

Prof. Piper: Generally speaking it is best to buy local seed if you can get it. That is a general rule. There are exceptions to it of course. I think undoubtedly you will find it better to get Eastern timothy.

Question: You would advise us to grow our own timothy seed?

Answer: Yes, sir; I would advise every farmer who has boys to start them to selecting. They will make mistakes.

Mr. Frazier: How does age affect the vitality of the timothy seed?

Answer: Not nearly so bad as other seeds. You nearly always get a good stand of timothy. I do not know how long it will live, but there is very little complaint on account of not getting a good stand of timothy.

## WEDNESDAY AFTERNOON SESSION.

Called to order by the President.

Music by Angelus Quartette.

Roll call of institute instructors.

The President: Now we have an important subject, one we would like to know more about. Prof. Selby, of the Experiment Station, is going to tell us something about weeds, and how to destroy them. I want you to listen to him, and then take your pencils, and make notes of questions you want to ask him when he is through.

## WEEDS, WEED SEEDS AND WEED SPRAYING.

By Prof. A. D. Selby.

Mr. Chairman, Ladies and Gentlemen:—What I have to present this afternoon is in the form of a series of slides with brief comments, and at the end a brief discussion of weed spraying.

[The following slides, seventy-nine in number, were shown and commented upon:]

	KIND OF SEED OR PLANT.	WHERE FOUND.	ANNUAL, BIENNIAL OR PERENNIAL	RANK AS A WEED.
1	Seeds of Chess or Cheat .....	In wheat and oats...	Annual .....	Unightly.
2	Seeds of Quackgrass or Couch-grass .....	In brome grass seeds	Perennial by root- stocks!.....	Very bad.
3	Plant—Quackgrass or Couch-grass .....	In sod land.....	Perennial.....	Very bad.
4	Seeds of Green Foxtail .....	In red clover seed ...	Annual .....	Not serious.
5	Plant—Green Foxtail .....	In stubble land, etc. .	Annual .....	Unightly.
6	Plant—Crab-grass .....	In stubble land, etc. .	Annual .....	Unightly.
7	Plant—Old Witch Grass.....	In stubble land, etc. .	Annual .....	Unightly.
8	Plant—Stinking Grass or Pungent Meadow Grass .....	In waste places .....	Annual .....	Unightly.
9	Plant—Squirrel-tail Grass .....	In waste and stubble land .....	Annual or biennial ..	Troublesome.
10	Seeds of Sorrel and Bitter Dock .....	In seeds of red and alsike clover .....	Perennial.....	
11	Plant—Sorrel .....	In acid soils .....	Perennial.....	Indicates need of lime.
12	Seeds of Docks—(Small) <i>Rumex crispus</i> ; (large) <i>Rumex altissimus</i> .....	In clover seeds.....	Perennial .....	Objectionable.
13	Seeds of Knotweed and Lady's Thumb....	In clover seeds.....	Annual .....	Objectionable.
14	Seeds of Penna. Smartweed and Black Bindweed .....	In clover seeds.....	Annual .....	Objectionable.
15	Seeds of Tumbleweed and Mexican Tea...	In clover seeds.....	Annual .....	Objectionable.
16	Seeds of Western Orache .....	In western alfalfa seed	Annual .....	Objectionable.
17	Seeds of Russian Thistle .....	In western alfalfa seed	Annual .....	Not serious.
18	Seeds of Chickweed.....	In clover seed .....	Annual .....	
19	Plant—Chickweed.....	In shady places .....	Winter annual .....	
20	Seeds of Cockle .....	In wheat, etc.....	Annual .....	Unightly.

	KIND OF SEED OR PLANT.	WHERE FOUND.	ANNUAL, BIENNIAL OR PERENNIAL.	RANK AS A WEED.
21	Seeds of False Flax-Spurry, Bird's-foot Trefoil and Sage.....	In clover and alfalfa seeds .....	Annual except Sage..	Unightly.
22	Seeds of Knawel .....	In crimson clover seed .....	Annual .....	Troublesome.
23	Seeds of Prickly Poppy .....	In western alfalfa seed .....	Annual or biennial...	Troublesome.
24	Seeds of Black Mustard .....	In oats and clover seed .....	Biennial.....	
25	Seeds of Charlock or Wild Mustard .....	In oats, etc.....	Biennial.....	Serious.
26	Plant—Charlock .....	In oat fields .....	Biennial.....	Serious.
27	Plant—Shepherd's Purse .....	In waste places and stubble land .....	Annual .....	Objectionable.
28	Seeds of Field Peppergrass .....	In clover and alfalfa seedings.....	Annual .....	Very objectionable.
29	Seeds of Pennycress .....	In clover and alfalfa seeds.....	Annual .....	Objectionable.
30	Plant—Pennycress .....	In northern Ohio....	Annual .....	Objectionable.
31	Plant—Winter-cress .....	In moist pastures ...	Biennial.....	Unightly.
32	Plant—Tumbling Mustard.....	In grain fields of northwest .....	Annual or biennial ..	Unightly.
33	Seeds of Crimson and Alsike Clover.....	Note difference in size .....		
34	Seeds of Red Clover .....	Note shape of seeds..		
35	Seeds of Alfalfa .....	Note shape of seeds..		
36	Seeds of Black Medick or Yellow Trefoil..	Note difference in shape compared with alfalfa, especially small outgrowth at side of trefoil.....	Biennial.....	
37	Seeds of Geranium, or Crane's Bill.....	Note fine markings on seed .....	Annual .....	
38	Seeds of Spurge .....	In clover seed. Note markings.....	Annual .....	
39	Seeds of Three-Seeded Mercury, or Waxball .....	In red clover—very frequent .....	Annual .....	Unightly.
40	Seeds of Velvet-leaf, or Indian Mallow ....	In clover, etc.....	Annual .....	Unightly.
41	Seeds of Bladder Ketmia, or Flower-of-an-hour.....	Note markings of seed .....	Annual .....	Serious pest.
42	Seeds of Evening Primrose .....	In clover seed.....	Biennial.....	
43	Seeds of Agrimony and Golden Hawkweed .....	Agrimony in timothy, Golden Hawkweed rare .....	Both perennial.....	Hawkweed very bad.
44	Plant—Agrimony .....	In timothy seedings..	Perennial.....	Unightly.
45	Seeds of Wild Carrot.....	In clover and alfalfa seeds .....	Biennial.....	Very bad.
46	Plant—Field Bindweed .....	In bottom lands.....	Perennial.....	Very noxious.
47	Seeds of Wheat Thief and Blue Vervain..	In clover seeds.....	(1) Annual; (2) perennial.....	
48	Plant—Wheat Thief .....	In seedings and waste land .....	Annual .....	Objectionable.
49	Plant—Hound's Tongue, or Dog-bur.....	Pasture lands .....	Biennial.....	Objectionable.
50	Plant—Blueweed.....	In pasture lands.....	Biennial.....	Objectionable.



	KIND OF SEED OR PLANT.	WHERE FOUND.	ANNUAL, BIENNIAL OR PERENNIAL	RANK AS A WEED.
51	*Seeds of Clover Dodder .....	In clover and alfalfa seeds .....	Perennial in plants..	
52	*Seeds of Field Dodder, or Alfalfa Dodder..	In clover and alfalfa seeds .....	Perennial in plants..	Clover hay at- tacked by dod- der causes bowel troubles in stock to which it is fed.
53	Seeds of Self-heal and Catnip .....	In clover seed .....	Perennial .....	Very common.
54	Seeds of Horse Nettle .....	Rare in seeds .....	Perennial .....	Very bad.
55	Plant—Horse Nettle .....	In southeastern sod lands .....	Perennial .....	Very bad.
56	Plant—Buffalo-bur .....	In western seeds .....	Annual .....	Objectionable.
57	Seeds of Moth Mullen .....	In timothy seed .....	Biennial .....	Common.
58	Seeds of Rugel's Broad Plantain .....	In clover seed .....	Perennial .....	Very common.
59	Plant—Rugel's Broad Plantain .....	In clover seedings and in lawns .....	Perennial .....	Unightly.
60	Seeds of Bracted Plantain .....	In clover and alfalfa seeds .....	Annual .....	
61	Plant—Bracted Plantain .....	In clover and alfalfa seedings .....	Annual .....	Objectionable.
62	Seeds of Buckhorn or Narrow Plantain....	In red clover, etc....	Perennial .....	Very bad.
63	Plant—Buckhorn or Narrow Plantain....	In clover fields and lawns .....	Perennial .....	Very bad.
64	Seeds of Chicory .....	In clover and alfalfa seeds .....	Perennial .....	Bad.
65	Plant—Chicory .....	In roadsides and meadows .....	Perennial .....	Bad.
66	Seeds of Dandelion .....	"In the air" .....	Perennial .....	
67	Plant—Willow lettuce .....	In waste lands .....	Annual .....	Objectionable.
68	Plants—Willow Lettuce and Prickly Lettuce	In waste lands .....	Annual .....	Objectionable.
69	Plant—Perennial Sow-thistle .....	A few points in north- ern Ohio .....	Perennial .....	Very noxious.
70	Plant—Golden Hawkweed, or Orange Hawkweed .....	In Geauga and Ash- tabula Counties ...	Perennial .....	Most noxious.
71	Seeds of Canada Thistle .....	In clover and alfalfa seeds .....	Perennial .....	Most noxious.
72	Seeds of Mayweed, or Dog's Fennel .....	In clover seed .....	Annual .....	
73	Plant—Yarrow or Milfoil .....	In waste lands and meadows .....	Perennial .....	
74	Plant—Oxeye Daisy, or White Daisy .....	In meadows, especial- ly northeast .....	Perennial .....	Very bad.
75	Plant—Giant Ragweed .....	In bottom lands .....	Annual .....	Unightly.
76	Plant—Common Ragweed .....	In grain stubble .....	Annual .....	Very common.
77	Seeds of Marsh Elder .....	In western alfalfa seed .....	Annual .....	Not serious.
78	Plant—Canada Thistle .....	Occasionally in north- ern Ohio .....	Perennial .....	Most noxious.
79	Plant—Star Thistle .....	Occasionally in alfalfa seedings .....	Annual .....	Spiny.

\*We have here two seeds of the clover dodder, characterized by their greenish look as if they had not a seed coat. It is not necessary to say what a curse they may be in the clover fields. It has just been brought to my attention in the last six weeks that clover hay containing dodder appears to cause bowel trouble among horses, and clover invested with dodder has been accused of causing scouring in cows. Much dodder was brought into Ohio in imported clover seed during 1907 and 1908.

The larger seeds are of the field dodder, a pest that is just as serious as the other, although the seeds are less common.

### Worst Weeds.

Worst weeds are many. Below is a list of several with reasons for rank:

Wild Onion, Wild Garlic—Spreads by bulblets in soil. Very troublesome.

Quack-Grass—Has stems underground which spread it.

Horse Nettle—Also has underground stems and produces seed.

Canada Thistle—Has rootstocks (stems) like quack-grass and horse nettle.

Its seeds ripen in the North.

Wild Mustard, Charlock—Produces so many seeds which lie in the ground and get into oats, etc.

Cypress Spurge—Has rootstocks below. Much planted in cemeteries.

Wild Carrot—Looks so nasty, though it lives but two years. Seeds get in clover and alfalfa seeds.

Indian Hemp, Dogbane—Its roots and rootstocks get into bottom lands.

Milkweed—Bad for the same reason as dogbane.

Bindweed, Wild Morning Glory—Has underground stems (rootstocks) in great abundance. Vines twine about grain.

Field Bindweed—Has smaller leaves, but all the bad traits of regular bindweed.

Clover Dodder—Dodder is a leafless parasite. Its seeds get into clover seed, the plants then twine about and rob the clover plants, living upon them as long as the clover plants survive.

Alfalfa Dodder—Both this and clover dodder grow in alfalfa and are greater pests than in clover because the seedlings last longer.

Toad-Flax, Butter and Eggs—This like cypress spurge is a cabin site and cemetery pest.

Moth Mullen—Is biennial. Has little seeds that are common in timothy seeds.

Bracted Plantain—Is an annual, not serious.

Narrow Plantain, Buckhorn—Is perennial. Seeds very bad in clover and alfalfa. Worst on loamy, warm soils low in lime.

Broad Plantain—A doorway biennial with broad leaves. Seeds bad in clover.

Chickory—Has blue flowers, deep roots and its seeds come in alfalfa, etc.

Golden Hawkweed—A vilest of meadow and pasture pests from northeastern Ohio. Seeds spread by wind. Salt spraying a remedy.

Ragweeds—Annuals which show careless husbandry.

Whitetop—A biennial in meadow. Spraying will keep it down in timothy fields.

Oxeye Daisy—A pasture pest that lives year after year. Believed it can be kept down by spraying.

Do you know your own weeds? If not write for Bulletin 175. A Second Ohio Weed Manual.

Do you know whether you sow weed seeds in clover, timothy and alfalfa seed? Why not send the seed samples to the Experiment Station for free examination before sowing?

In the matter of weed spraying, I have been urged by the citizens of the state within the last year to take up the matter of weed spraying and its possibilities in our climate. As a consequence we have tried, although we have had no adequate funds, to make some spraying tests to find out whether it is worth while to proceed further. In this matter of spraying to kill weeds we have to keep in mind the circumstances under which we apply the spray. First, it must be a spray that is fairly destructive to the weeds; in the second place, it must be a spray that will not injure grasses and growing wheat, oats, barley and the like, consequently we may not use weed killers like sulfuric acid and spray them over the fields, because it would kill the grasses and weeds alike, but we can use solutions of various compounds that have been tested everywhere. Among these we may mention the dilute solution of blue vitriol or copper sulfate, a stronger solution of iron sulfate and yet stronger solution of common salt, and in the same connection chloride of lime solution, which belongs in the same class with common salt. These preliminary experiments conducted in co-operation with various people over the state and some at the Experiment Station, have shown about this: We can use either of these three sprays, copperas, iron sulfate, common salt or chloride of calcium lime, effectively in killing weeds without injury to the grasses. The strength of the iron sulfate will run about one and one-half to two pounds to the gallon of the mixture used; the common salt we find has to be used at the rate of about three pounds to the gallon, which is nearly a saturated solution, made by suspending salt in a bag at the open surface of the liquid; chloride of calcium is used at the same rate as common salt.

We find we can spray lawns with dandelions and kill off the dandelions before the bloom forms, but we need to use the sprays frequently to prevent the formation of new leaves. We get very good results by using these in killing off Canada thistle; still better results from the salt I think than from the iron sulfate.

On poison ivy, which had overrun some of our private fences at the Experiment Station, we got our best results from either the chloride of calcium or the common salt, and we succeeded in defoliating the poison ivy. We applied a second spray after the growth started again to stimulate a second growth of the plant in the hope that the winter would take care of the plant after this late growth.

In the horse nettle our experiment showed that common salt is the most satisfactory spray. We can defoliate or kill off all of the leaves of the horse nettle without injury to the pasture with the sprays of common salt solution at the rate of three pounds to the gallon of spray. In all applications over areas we have to count on using about fifty to seventy-five gallons per acre actual spray. Altogether we must conclude that a single spraying is scarcely sufficient to bring about effective results anywhere except in the mustard family. With mustard in oats, wheat, and so on, if we wait until the plants come into blossom and spray to the amount of fifty to sixty gallons per acre, we can kill them down so they will not seed before the harvest of the grain crop, but with the dandelion, with yarrow, to a less extent perhaps with horse nettle and Canada thistle, and with golden hawkweed, we believe that from two to three sprayings per season will be necessary, because while we kill down to the ground the plants as they come into blossom, the plants spring up again, and we want to exhaust the underground supply of food by killing off the leaves again the second and third time. The same applies to the checking of horse nettle.

Our results with yarrow at Carpenter were very gratifying indeed, and I believe it will be possible to clean up the yarrow in meadows where it is worth

while by a single spraying before the harvesting of the hay. This is to be made before the first white bloom shows on the yarrow, but in a rainy season following the harvest, if the plants spring up again the area should be gone over again in the fall so as to kill down all the rosettes or fern-like leaves of yarrow.

As to whether it will be possible to go forward with systematic spraying that will remain with the public and the authorities that provide the funds for the station. The Experiment Station has concluded that in its estimate, and feels if it meets with the favor of the people, the state will provide for the experiments in this line.

For this purpose of spraying in the fields, the type of sprayer is essential, that of a traction sprayer, but double width. They have it made now by nearly all the manufacturers of spraying machinery with a folding line of pipe behind carrying the nipples. This can be folded up to pass through gates and openings in fences. In that way we can spray twelve feet at a time and apply the spray with an ordinary traction power, so that all the labor involved is the labor of making up the solution and filling the tank and driving the team over the area to be treated.

In conclusion, I wish to express my belief that we have in this not the only means, but a very promising means of cleaning up our lands, of cleaning up our meadows, of checking these great pests like horse nettle, Canada thistle and ox-eye daisy, which tend to invade our pastures. And since we have in our time a tendency toward horse power in doing this work, I believe it is a most promising future means of working out the control of these weed pests.

Mr. Stabler, of Maryland: I would like to know if you have tried any treatment for chick-weed in alfalfa, whether you apply anything to it in winter time to kill the chick-weed, and not the alfalfa.

Answer: I have not. We ought to be able there to accomplish something. Of course we must bear in mind these sprays kill the leaves of clover and alfalfa, and all broad leaved plants, but when the leaves are at a minimum they might do well.

Mr. Stabler, of Maryland: We are doing that in Maryland.

Mr. Hummond: Do I understand the professor to say this solution of salt, three pounds to a gallon, will kill Canada thistle?

Answer: If you spray on them just when they come in bloom it will prevent seeding, and kill the plant down to the lower stem, and even often well down to the ground.

A Member: I was bothered this year with horse-nettle, the first I ever saw in our community. I sent you the sample and you told what it was. It is just in a few places in a twenty-acre plot that I bought, and this same application will do that?

A. It will not kill the stems to the ground, it will take off all the leaves. You will have to repeat oftener; you may have to repeat the spray two or three times with horse-nettle.

Mr. Myers: Can they be killed with salt solution in one season?

A. No perennial plant can be killed in a single season. It will take you two or three seasons for killing by spraying Canada thistle, horse-nettle, etc. The principle is this: The leaves are the feeding organs of

the plant; the basis of growth, the carrying power of growth over each winter is in the root. If we kill off all the leaves the root dies out more and more until it is entirely killed.

A Member: Won't a hoe do the same thing?

Answer: With the proper man with the hoe.

Question: Have you tried mulching—cover with straw or clover, or anything?

Answer: Yes; these plants grow through the mulch.

Question: Won't that rid you?

Answer: It will not with any of these plants with underground stems—Canada thistle, horse-nettle, quack grass.

A Member: How about tansy and iron weed?

Answer: Well, you know tansy is the one I call yarrow. We can kill that down. It will take at least three seasons with iron weed. I believe we can get after it successfully in the same way, but I haven't tested it.

Question: Milk weed, professor?

Answer: It is easily killed so far as leaves are concerned. I believe the spray only kills the leaves and tips of stem; you would have to repeat.

Curlis of Wyandotte: Plantain and buckhorn—does spray have any effect on those?

Answer: Yes; we may say that these sprays, where you have them in grasses, can kill down the leaves with each application. The trouble now with the plantain and buckhorn proposition is that they are more often the pest in clover, and we don't dare to spray clover or any broad leaved plant. It is only grasses that get through these sprayings without injury.

Sherman, of Butler County: I would like to ask about bind-weed, morning glory in the corn field. Would the application kill the corn?

Answer: It will not. I am very hopeful with the bind-weed—where we have it in corn, that is. But in that case we would have to have a special device for running through the corn rows, and it would require a special spraying device to apply the spray to the corn rows, but you need not fear injury to the corn blades, or the base of the stem with either of these applications.

Mr. Faucett, of Morgan: Did I understand the professor to say that dodder in the hay would cause scouring in horses?

Answer: I have a case reported to me of horses affected that way.

The Chairman: How about this weed in alfalfa that causes poison in horses—St. John's wort?

Answer: Well, we cannot meet that with spray. That is apparently an easy plant to eradicate. I would pull it out by hand.

A Member: That is what we do.

Mr. Cobb, of Jackson: The daisy which you spoke of, does the spray destroy it in meadows?

Answer: We have every confidence to believe so, but the co-operator that had the daisies to spray for some reason didn't get his test in. I haven't any experimental data, except a little in one of our fields at Carpenter. We killed it down very satisfactorily as to leaves and parts above the ground.

Mr. Brown, of Wyandotte: Did you say salt would kill the horse-sorrel?

Answer: The sprayings of salt will of course kill down the plant above the ground, but the plant has underground stems and will grow up again. The best way to treat sorrel is to make a lime application, and crowd it out.

The Chairman: What amount per acre?

Answer: Raw limestone, one ton or about; caustic lime, 1,000 pounds.

Hope, of Highland: Would not cultivation and rotation beat it all?

Answer: What was the old story in Genesis? That Adam wasn't contented to be in the Garden, and enjoy it; he had to sin. Now I don't know that I am endorsing that doctrine particularly, but we deal with these problems according to our conditions of culture. It happens to be that in these United States we are now passing through the culmination of our large area culture. We have accumulated all the sins of our predecessors in the weeds, and are short of farm hands. If we had as much labor as they have in Europe then the spraying problem would not enter so largely. We could handle it. I am suggesting this only as a means of meeting our particular contingencies. I am making no reflection on the man that keeps his lands clean without spraying. He is the man I like to see. But if we have these to deal with we often have to depend upon measures that will do the work under our conditions.

Mr. Ebersole, of Pickaway: In most of our wheat fields after we cut off the wheat we have a growth of large weeds and foxtails. I would like to know whether or not we could take a mowing machine and cut them down, and at what state of growth, and whether or not it would enrich the soil so to do?

Answer: It is always good culture to clip the wheat stubble. I should say make it a rule to do that clipping when you can accomplish the result of killing the annuals for that summer as nearly as possible, and before they have ripened any seeds. As a rule you will have to clip the large weeds a little earlier in order to get the foxtails. I ordinarily would not wait for the large weeds like ragweed to come into blossom. We cannot always get up on our stubble at the time that is best. But for our hay harvest that might give us the best results in preventing the seeds to ripen.

Mr. Kugler, of Fairfield: What strength do you use iron sulfate spraying for poison ivy?

Answer: The iron sulfate, two pounds to the gallon. We didn't get quite as good results from iron sulfate as we got from common salt on poison ivy.

Mr. Shiry, of Putnam County: We are interested in our section of the black swamp in the dandelions. That is a seed that blows. We find our meadows are yellow with dandelion. What could we use to eradicate them?

Answer: You can use iron sulfate one and three-fourth pounds to the gallon, and go over early before the grass is grown very high, or common salt at the rate of three pounds to the gallon. You can by taking them at just the right time reduce the amount of seeding very greatly by killing off all the leaves before the blossoms are at the stage that they will develop seed, and as the meadows grow up the crowding will tend to decrease them.

Mr. Sanford, of Madison County: Wouldn't sheep do much of this work, and at a great profit?

Answer: They won't do anything with horse-nettle. They simply eat the berries, and carry the seed up on the hills where they sleep at night. There is one kind of weed that will pretty generally be kept down by sheep. The sheep will take care of the wild lettuce.

Question: Yarrow also?

Answer: No.

Question: The daisies?

Answer: Sometimes they will, but they grow weary.

Question: Will salt kill the underground stems of horsenettle?

Answer: It will not. You simply have to rely upon repeating the spray, and killing off the leaves as often as they form, keeping that up to the third season, and starving the underground stems out.

I thank you gentlemen very much for your kind attention, and if there are any of you that have no copies of our Bulletin 175, "The Ohio Weed Manual," copies of which are lying on our table, you can send a card to the Station, and we will send it to you. (Applause.)

#### LESSONS FOR AMERICAN FARMERS FROM EUROPEAN FARMING.

By Dr. W. I. Chamberlain.

I think it was Josh Billings who began his lecture on "Snakes in Ireland" as follows: "There ain't any snakes in Ireland; St. Patrick drove 'em all out." I cannot say exactly that there are no lessons for us farmers from European farming, but I can truly say there are far fewer and less valuable lessons for us than I had supposed from my reading before I studied that farming on the spot. The various circumstances are so different that many of the crops and practices of Europe are not at all applicable here. And I think that the pre-

valling practices of the best farmers in any given region are usually best for that region. The circumstances I refer to as chiefly influential in this respect are those of soil, climate, land tenure, rents, wages and markets. A few words on each of these:

#### Soils.

The soils of England, France, Italy and Holland are much less different from ours than are the other things named. Most of the soils in England are glaciated limestone or chalk, and those on the continent are mostly quite similar. I think they average as good as those in eastern Pennsylvania, western Ohio and most of Indiana. With Yankee egotism I had supposed there were no large areas in England and continental Europe as good as those just mentioned here. I found I was mistaken. Almost all England reminded me of Lancaster and York counties, Pa., and Stark and Wayne counties, Ohio, except that there are almost no good barns. The vast plains with far off mountains, and in France and in southern Italy from Rome to Naples, and in northern Italy through Venetia, Lombardy and Piedmont, by their fertility reminded one of the rich prairie soils of Illinois and Iowa. Of course the mountain regions, as with us, furnish a difficult agriculture, but the proportion of fairly level and very fertile land is far greater than I had supposed. In Holland all the land except that used for ditches and for canals, large and small, and a small area of higher land in very old and heavy forests, is used for crops and for pastures and meadows, and is amazingly fertile.

#### The Climate.

This differs far more from ours than do the soils. It is very much milder in most of Europe, and especially in England, than in the same latitudes with us. England lies almost wholly between fifty and fifty-four degrees north latitude. The south end of England is north of the north line of Vermont, Maine and North Dakota, where the thermometer by December 10 is often forty degrees below zero. And yet the vast volume of the tropical "gulf stream" waters from the Amazon and Mississippi, the Caribbean Sea and Gulf of Mexico, so encompass England that it has almost no snow or hard freezing south of the line of Scotland; farm work goes on all winter, almost uninterrupted, the sheep and colts and even the cattle thrive on the rank, green winter pasture, and barns for shelter of live stock and their feed are almost wholly unused and unknown. In this I think they make a mistake, however. All through eastern Pennsylvania and northern Ohio you will find fine, large "bank barns," costing from one thousand five hundred to five thousand dollars or more—made to cover conveniently under one roof all the farm live stock, except pigs and fowls, and all hay, feed, litter and water for their winter comfort, all stored by the help of gravity at minimum cost, and with big, dry, straw-littered barnyard around the great straw stack for the comfort and exercise of live stock in sunshine in mild weather. Not one such barn did I see in England or in all Europe, except a few in Holland. Instead, they have chiefly yards, cheap sheds, sometimes stables for cows, and stacks of feed and litter. These stacks are carefully thatched to protect the hay, and the thatch is gradually and the hay is laboriously cut down, daily, in sections a yard square or so, and lugged to the cattle. I saw no silos. They have so much nasty, misty, drizzly, rainy weather, especially in England, that I cannot help feeling that a good Dutch bank-barn would be a real comfort to both man and beast. Of course cattle are out at pasture much of the time, and colts and sheep most of the time, but at least at night such barns would be a great comfort and great savers of time and feed and manure.



### Land Tenure.

Our system seems to me to be almost infinitely better than the European. Ours is democratic—for the common people. Theirs is aristocratic—for the favored few. Our government seems to me to have tried from the first to apportion the agricultural land of our vast domain honestly and fairly to the common people who wished to occupy, improve and farm it; selling it in farms of one hundred and sixty acres or so at one dollar and twenty-five cents per acre, or giving it outright in homesteads to actual settlers.

### Large Areas to Favorites.

But in England the land in large areas was given to favorites of the ruling power, centuries ago, and has descended in almost unbroken blocks or areas to the present aristocracy of nobles. For so utterly unjust was this division of land seen to be, that it was hedged about for defense by the equally unjust and senseless laws of "primogeniture" and "entail" by which these landed estates must go unbroken to the oldest son and son's son.

I had known these facts for many years, but never really felt them till we were in the "snug little island." Our first stop after landing at Liverpool was at Chester, fifteen miles southeast toward London. Everything in and about Chester is called "Grosvenor"—the family name of the Dukes of Westminster—everything, the museum, best hotel, livery stable, schools, parks, forests, game preserves, what not, all, "Grosvenor." In looking up these queer facts we came abruptly upon the utter injustice of the entire land tenure system of England. It lies as follows at Chester, and this is simply a typical case:

The chief source of the Grosvenor family's wealth, now estimated at about three hundred million dollars, belonging to the present Duke of Westminster, was land, land given outright nearly nine hundred years ago by William the Conqueror, to his prime favorite, his nephew, Hugh Lupus, his chief hunter, "gros-veneur" in French meaning big hunter or chief hunter. The Conqueror not only gave him large tracts in Westminster, now immensely valuable ground rents, whence the Duke's title and chief source of revenue, but also gave him vast areas in and around Chester, together with the right (of might) to seize by force of arms all the land he could from the nearby Welsh land owners, for Chester lies close to the border of Wales.

I have said this is a typical case. Most of the vast wealth in land, mines, city ground rents now held in England by nobles, bishops and by the church, in like manner dates back as its source to similar free grants made to favorites centuries ago by William and by other kings and conquerors, who themselves owned the land only by conquest.

And so it has come to pass that about thirty-six thousand persons now own, thus unfairly, one-half of the realm of England, while the other thirty-six million of the people own the other half. Each man of the unjustly favored few owns as much land and other of nature's forces and resources included in the term "land," as each thousand of the unfavored many, or one thousand times his just share for which, I might add, that he and his ancestors "toiled not, neither did they spin." Not only this, but much of this unearned land and wealth of the favored few is shut off from useful agriculture and held as parks and game preserves exclusively for the rich. Still further, even the part of it that is used for agriculture is so encumbered by hunting and other rights of owners, and by restrictions as to rotation, manure, fertilizers, stock keeping, sale of crops, etc., as to make English tenant farming on the whole undesirable and unremunera-

tive. Still further, these holders of unearned wealth, represented in Parliament by the House of Lords, have resisted and are today resisting all attempts to tax their wealth fairly, and the ridiculous fact remains that many buildings at the business centers of large cities on which immense ground rentals are exacted, rest on land still taxed to the rich owners, just as three hundred years ago as farm land. No wonder wages are low, and poor rates high, and old age and disability pensions numerous. No wonder many thinking men, moved by such facts, have felt that a nation's "land," coal, water power and other natural advantages should be sold or leased by the nation for the benefit of the people, and not of the favored few. No wonder Roosevelt and Pinchot feel that we should conserve for the people and not for a favored few, our natural resources still remaining unsold. One thing we farmers can learn from this phase of European agriculture is to thank God that thus far our agricultural lands here are in the hands of the common people. If they over there can live by farming under their excessive rents, we surely, who own our lands and really have low taxes, should be able to make farming pay.

#### Wages.

As a result in part of causes just set forth, wages are very low on farm, in factory, mine and city—in England sixty to seventy cents; in France, 50 cents; in Italy, forty cents, while meat, bread, butter, etc., are higher than here. With us, due, in part perhaps, to our tariff laws, wages in the factories, mines and city industries are so high as to force farm wages up, and to draw away our farm help or make it restless, independent and sometimes insolent and transitory. Again it is so easy to buy or rent farm land here that any enterprising young man who likes farming can work a few years, save up his wages, buy or rent a farm, get married, work out of debt and join the independent land-owning class.

But in England there is no such opportunity. It is next to impossible to buy agricultural land, and then at very high prices. As a rule it comes into market only when a family dies out and then with many legal technicalities. Nor can a farm laborer with little or no capital even rent a farm. Then, too, the classes in society there, as Mr. Garfield once remarked, "Are like the strata of the rocks," and a member of one stratum can seldom rise above his geological place. And so father, son and grandson will live successively in the same cottage and work for generations for the same large land owners or renter. This secures to the English farmer a faithfulness, intelligence and continuousness of farm work of which we know almost absolutely nothing. We may well wish for something like it here, though we may not desire the causes that produce it there. Our remedy, in part, of course, is to use less human muscle and more horse and steam and wind power, and more labor saving machinery.

#### Climate and Labor in Determining Crops.

I have noticed that Englishmen, and especially Scotchmen, coming to the United States, always wonder that we do not grow more root crops—swedes, rutabagas, mangels, etc. On the other hand I did not see a hill or stalk of Indian corn in all England. The reasons for both facts are obvious and told in two words—climate and cost of wages. Climate alone settles the case against corn in England. The summers are so cool, moist, cloudy and rainy that corn, a hot weather crop, will not grow well and will never mature enough even for silage. But this same kind of weather is exactly suited to root crops, favoring transplanting and continuing their growth into December. Prices of wages there, too,

permit an amount of hand labor in transplanting, weeding, pulling, topping and pitting which would be ruinous here financially at our wage rates, even if the roots grew well. But here corn, king of all feeding crops, has just the weather to mature it in our wide corn belt. Then, too, as to wages, corn uses much labor-saving machinery—two-horse planters that put in twelve to fifteen acres per day, harrows and weeders that destroy weeds by the million at germination; harvesters to cut and bundle the corn for the shock or steam silage cutter, steam huskers and shredders—machines that grow and harvest this king of crops with the minimum of human muscle.

### The Markets.

In England the markets and the laws favor animal husbandry, all kinds of meats being about fifty per cent. higher than here, and the laws preventing the dog nuisance that plays havoc with our sheep industry. This larger and better animal industry with careful saving of manure, better tillage, better rotations and more clover, greatly enriches the land.

### Maximum Crops.

The thing of most value we can learn from English farming is to treat our land better in the above respects, so as to raise bigger and more profitable crops, giving personal attention to all details. I visited a Mr. Spanton and a Mr. Berry, two of the best and most extensive farmers near Canterbury, Kent county. I saw Mr. Spanton's wheat just coming up about December 6, rank and thrifty. I saw the grain of the 1908 crop in bags and bins. His ten-year average of wheat was forty-eight bushels, sixty-four pounds to the measured bushel. He said he could grow more per acre if it did not lodge so much; that his land has now really become too rich for wheat, oats and barley, made so by the rotation he must follow on his leased land, with so much feeding of cattle and sheep and careful saving of all manure, and with little sold from the farm except hops, wheat, meat and wool. He said he is using some phosphates to balance the over-proportion of nitrogen produced by his kind of farming and to stiffen the straw. Well, I never knew of an American farmer who produced too much manure and got all his land too rich! I think we may well learn from him and others like him to keep more live stock, husband the manure more carefully and grow forty instead of sixteen bushels of wheat, and seventy instead of thirty-three bushels of corn per acre. Our good land is as good as his originally, but we have not farmed it so well, decreasing instead of increasing its fertility. Wages here are much higher, but clover, corn, oats and wheat in rotation, all fed but the wheat with phosphates judiciously bought and manure all saved, will increase fertility; and this rotation requires a minimum of hand labor and a maximum of power implements and machines.

From Mr. Spanton, too, we can learn to give our personal attention to every detail of our farming. On eight hundred acres of land, more than half of it drained swamp land, blue grass sheep pasture, and on which he pays over eight thousand dollars per year in rent and taxes and as much more in wages, he has, in twenty years, in spite of the great English agricultural depression, cleared some four thousand dollars per year or five dollars per acre per year.

The trustees of the Canterbury Cathedral, of whom he rents the land, asked him once in connection with a committee of Parliament: "How is it, Mr. Spanton, that in all these years of great agricultural depression, when large farmers

everywhere are failing, you have made money!" "I think, sirs," he replied, "'tis partly in knowin' 'ow, an' partly because 'tis with the farmers as 'tis with 'im that's to be 'ung; 'e's got to be right theer 'imself!"

### French Farming.

From Paris south to Marseilles on the Mediterranean Sea, we traveled by daylight (as in fact we always did), to see the farms and the farming and farm life. The railroad follows up the broad valley of the Seine and its main branch, the Yonne, then across the divide along the Burgoyne Canal to the Saone River, a main branch of the Rhone to Lyons, the center of the great mulberry, cocoon and silk raising and weaving industry, thence down the broad fertile valley of the Rhone to Marseilles. During this two days' daylight trip through the length of France, along two of its most fertile valleys, we saw, I suppose, some of the much lauded independent peasant farming. It did not strike me as inviting or worthy of imitation. True, these peasant farmers lay up money, but it is by long inherited parsimony, by work of women and children and by cheating "back and belly" of their dues. On food and clothing I don't think they spend one-fourth what our working farmers and city laboring men do and think they must. They eat little meat, living mainly on vegetables, soup, some nuts and "black bread," eaten without butter, seldom even with olive oil, usually with sour wine, which is abundant and cheap, constituting what seems to be the main part of the freight on the railways, canals and city drays.

Apparently the land is divided off, though without fences or hedges, simply by corner stones, into plots of about ten acres, each owned or rented by a peasant farmer and worked by him and his family, mainly by hand work, sometimes with one horse or donkey. The principal crops seem to be grain, vegetables, fruit, especially grapes, and olives up the hill slopes, and in southern France mulberry leaves and bushes to feed the silk worms, and lemons, oranges, figs and dates. The peasant farmers live in small, huddled-up villages in little uninviting cottages, with stable for horse and cow. They seem to go daily one to three miles with their families to work their ten-acre plots of land, on which are no buildings, unless it be a small hovel as shelter from sudden storms. I think that the would-be philanthropists in the United States are greatly mistaken in advising American farmers to live in villages as a remedy for the supposed isolation and loneliness of farm life. We love our many farm animals. They are a sort of company for us, and the care of their young delights us. The growth of our varied crops, too, gives constant pleasure and enjoyment, while good roads, centralized schools, interurban railways, rural free mail delivery and plenty of reading and music, almost wholly overcome the supposed loneliness. On many of our prosperous farms our houses and barns are elegant and modern, and have cost five to ten thousand dollars—as much as all the buildings in an entire French peasant village. Shall we take our numerous farm animals to town each night and draw feed there and manure back? Impossible. Shall we leave them on the farms unprotected and go to town ourselves each night? Impossible again. The power and animals and machines and the mind that directs all should be near the work to be done. Shall we leave rural beauty for the crowded village? The rich in cities are seeking this very quiet, isolation, pure air and country cleanliness and loveliness of scenery which these pseudo-philanthropists are advising us to leave. The American farmer lives in the midst of beauty and in a degree of intelligence, education, comfort and independence known only to the wealthy classes in Europe. A glimpse of French peasant farming should make us thank God for the conditions of land tenure and democracy which make such a life possible.

In Italy the condition of the common people in city and in country is still more deplorable. They live in what we should call abject poverty. South of Rome to Naples and beyond, human muscle, which under normal conditions is the costliest form of energy or power, does all the farm labor, even digging, hoeing and raking the land instead of plowing, harrowing and cultivating with two, three or four horses to one driver as with us. Sometimes we would see a half dozen men, women and children digging the land with spades—the usual way there—while a patient donkey or jackass stood tethered hard by and watched them work. And I would say that they are greater jackasses than he, or they would make him and his mates plow the land instead of digging it themselves. I think we did not see a plow south of twenty miles from Rome clear to Naples, over one hundred miles.

In Holland the farming is better but utterly different, necessarily so from circumstances. The rich, black soil, rescued from the sea, guarded by miles of huge and costly dykes from its encroachments, demands an agricultural treatment of its own. It lies below the level of the sea and therefore its large excess of rainfall above the needs of the crops must be drained up into the sea. The flat land is divided into lands a few rods wide by narrow open ditches, all on a level, all connected. The surplus water from these is forced into larger canals by numerous large windmills, wind being the least expensive motive power. From these larger and navigable canals the water is forced through the open gates in the great dykes into the sea at low tide by great steam engines which revolve huge, long paddle wheels and send a river one hundred and fifty feet wide and six feet deep into the sea six miles an hour. But in spite of all this expensive surface drainage the water level and the enforced outlet are so near the ground surface as to make tile drainage impossible, I judge, and to make live stock husbandry with grasses and hay pay better than tillage, except of bulbs and grain. Mutton, wool and milk, cheese and butter seem the principal money products in the parts we visited. The farmers live in neat, inviting villages unlike those of the French peasants. Their long, narrow farms reach the village at one end. Cow stable, cheese factory and home are all under one roof. "Don't you smell the stable in the parlor?" "Never." But my Yankee nose did all the same, though the utmost care and cleanliness are observed. From the front hall the front door looks into the street, the back door into the stable, a door on one side into dining room and kitchen, on the other side into parlor and bed rooms. I saw several such composite homes at the village of Brock in Waterland, famous for Edam cheese. And the Dutch farmers are prosperous, happy, contented in spite of sea, dykes and up-grade drainage. But they are frugal to the point we should call parsimonious. And they have a fertile soil and three hundred years of hard-won liberty to make them self reliant men.

What can we learn from European farming? First of all to thank God that here the farmers own the farms, intelligent, prosperous, cursed by no huge estates given centuries ago to royal favorites and held together yet by laws of "primogeniture" and "entail," and held out of useful agriculture for parks, game preserves and the like for the exclusive use of the rich owners who never earned, nor did their ancestors, what now by law they own. Also since the power of human muscle is so very much more costly here than there, to use it in far smaller proportion and chiefly in directing and utilizing the far cheaper powers of animals and nature in the order of their cheapness as follows: Gravity, wind, water, steam, horses or oxen. Gravity costs nothing and stands always ready to help if we plan to let it, as with bank barns, basement stables and bank cisterns with unpumped water for stock, and garret tanks at the house with unpumped eaves-water for bath and water closet flush; or wind power, costing only the wind-

mill, good in Holland and in the level West where wind is strong, reliable and not too intermittent. Next in cost water power, wherever available. Next the steam and gasoline engine, wherever the work can be brought to the power, as in threshing grain, baling hay and straw cutting, ensilage, etc. Next in cost comes horse and ox power, and that can be used in nearly all farm work—taken to the work. Last of all, most costly of all, human muscle, never to be used as mere power or energy for “foot pounds” of work if human brain, eye and hand can utilize any of these cheaper forms of power.

And why is the power of human muscle the costliest of all? Because the man-machine, his fuel and his keep cost far more and he can do far less than horse, steam, etc. It costs two thousand dollars to raise the man-machine to full working age, two hundred dollars to raise the horse-machine, one thousand dollars to make a traction engine, but the horse is ten times and the engine a hundred times as strong as man for heavy work. Further, man's clothing and housing cost three hundred dollars or more per year, those of horse and engine almost nothing. Man's food (fuel for giving power) costs five cents per pound for his bread, and forty cents per pound for his butter; the horse's hay costs half a cent and his grain one and one-half cents per pound; the engine's food (in organic carbonaceous fuel) costs one-fourth cent per pound or less, and a pound of coal in the engine creates ten or a hundred times as much power as the pound of organic and large nitrogenous fuel consumed by horse and man. You see it all in a flash; we cannot afford to use the costlier human muscle—not half so well as they in Europe, where it is far cheaper relatively.

Again we must use these cheaper forms of energy, not only oftener and more than they do in Europe, but to better advantage. As a rule, we already do this. There I saw them plowing and carting with four horses, tandem, with two drivers besides the plowman. Here we hitch three horses abreast with eveners, rightly so called because they even up the work, make each horse do his exact share. The “evener” develops individual responsibility. The tandem method permits and encourages individual laziness. We might here take a useful hint for human society. Further, with the evener one man does the work of three in plowing—saves the costly human muscle of two. In this and many other things they can learn more of us than we can learn of them.

But in faithfulness to future generations in conserving and increasing the productiveness of the soil, we can and certainly should learn from them.

Finally, the lessons to us of European farming are those of optimism and courage. If English farmers, in spite of their unjust and burdensome land tenure system, high rents, poor rates, church rates and other taxes, can be successful, then surely we, with our cheap lands owned by ourselves and our low taxes and free churches, should be successful, cheerful, grumbleless. There the total annual tax is often five dollars per acre, paid by the tenant, besides his rent. Here it is seldom over fifty cents to one dollar per acre, paid by the owner, the farmer. If renters can prosper there, surely owners should prosper here.

Or look at Holland. If the Dutch could rescue their land from the cruel sea by costly dykes, and from the more cruel Philip II by still more costly war, and then prosper and lend money to the world, then surely we should prosper, for the Omnipotent built our dykes free of cost to us, saying to the sea long centuries ago: “Thus far shalt thou come and no farther, and here shall thy proud waves be stayed.”

Then let us grumble less, work more courageously as farmers and as citizens, ceasing not to thank God that we live in this good land, richest of all lands in its agriculture, its mines, its manufactures, freest of all lands in its government,

land of the common people, land of unbounded opportunity! And let us so work and so live that this rich, free, good heritage shall be richer, freer, better when we leave it.

Prof. Williams: I have heard quite a number of papers delivered on this subject, but I have never listened to such a descriptive article as this has been.

The Chairman: We have about eight minutes in which to discuss Dr. Chamberlain's splendid paper. Let your questions be to the point, quick and brief.

Stranger: What is the difference between their cultivation and ours that they can raise fifty bushels of wheat to the acre?

Answer: That reminds me of the question I asked of an Englishman of how he got such beautiful fields. He said "We manures it, and we 'arrows it, and we rolls it for 'undreds and 'undreds of years"—the same fellow. It has extended back for many generations. The bad system which gives the land to the owners and permits the rental for year after year to the same parties has put on to it certain conditions on the land, requiring certain conditions, has its good advantages. Here a man buys his farm outright, and he can do as he pleases with it.

Question: Are the English acres larger than ours?

Answer: I don't know. I don't think so. I think it's the Lord's acre over there.

Question: Is the climate better there for larger yields of wheat than it is here?

Answer: I don't think it is quite as good. It's too wet, nasty; nahsty they call it.

Question: You attribute it to the farming?

Answer: Yes sir.

Mr. Beggs, of Allen: Four thousand dollars a year! Did you ask Mr. Spanton, why he didn't buy a farm for himself?

Answer: He did. He farms it and lives on the other. As long as he can rent he is going to rent, and with thirty or forty men to work he can handle the whole thing. The farmer there is a business manager. He had bought 200 acres of land at \$150 per acre, then he has bought all of his farm machinery, and 2,500 of as fine sheep as I ever saw in my life, and it has made it under those rack-rent conditions paid to the Canterbury Cathedral.

Dr. Brown: Mr. Chairman—

Dr. Chamberlain: Dr. Brown has been abroad.

Dr. Brown: I don't wish to involve Dr. Chamberlain in any controversy, because I know his ability, but I would like to call his attention to the human mind, which enables one man to see a thing one way, and another man to see it another way, and so testify, both having seen the same thing.

Now I think that Dr. Chamberlain said they had no barns, that they relied upon open shelter or no shelter for their live stock; that they grazed them all winter. My experience has been, and I have visited nearly every large live stock producer in England, and a large number of them in Scotland, and I don't know a single place where they are not better provided with what they call stables than we are with those things which we call barns. It is a fact they bring all their grain into the stack yards and stack it on stack bottoms made of masonry. These are permanent; they stack every year under thatch. They have no hay mows or anything of that sort; and they have their own threshing machines, and when they wish to feed their stock, which they do every day, they go out into the stack yards and cut down so much rough feed, and haul it in. They bring in once a week or once a month as much of this grain, oats, barley, or whatever they need, and thresh in their own barns, and when that is done they bring in more and thresh that. It is a fact they do not graze their cattle, except sheep, all winter. They bring in about the last of October and turn them out the first of May, claiming that the grass is too green and lacks solids, claiming cattle do not do well, and it is washy.

Then for something else—that is the question of the tenant farmer. I have seen many tenant farmers, men of wealth, men of large reputations, men of national character who have large investments in all kinds of things, bonds, stocks, American, and otherwise, securities of every sort, who are purely tenant farmers. Thus, for instance, Mr. W. S. Ferguson, of Pixley Hills, one of the most famous stock raisers. So is the famous Mr. Ross, who has been in this country several times, and made two or three trips around the world. He is purely a tenant farmer. The reason why he remains a tenant farmer is that the men who own the land—. In England they tax the land according to the rental valuation; and the rental valuation of those farms is calculated by the tax assessor, and if he finds it is rented at £10 (English), the king's tax, the poll tax, and church tax, and every other tax figures up to 50% of its rental valuation, and then the man who rents it if he pays £100 (English money) for his rental he then must pay £20 for the very fact he rents it, which shows that our tariff conditions in this country are very much better than the free trade of England. But there are many other questions that might be discussed. But I fear that I have so aroused the maker of that paper that I shall never get rid of this thing.

Before they do rent they do let the game privilege on agriculture. You may rent a farm over there so much an acre without a game privilege, and then they rent the game privileges to rich Americans. But the owner can kill hares. I remember one day in Scotland we went out to kill hares, and up jumped a pheasant, and just as I pulled the trigger the man cried, "Ho, ho, man! Don't shoot!" Well, I had al-



ready shot, but he had so startled me I missed, and probably would not have hit anyhow. He said: "Had you killed that pheasant it would have cost me £20," or nearly \$100.00. Now the Doctor is one of the most interesting men I know of, the best man that I know, and I trust very much that he will keep his seat, because I do not want to prolong this discussion. I wish to simply support the Doctor in one statement. That is with reference to muscle, the use of muscular force in Italy. Once I was coming from Naples to Rome, which he says is a distance of 150 miles; I had forgotten. As we came along a great mountain had fallen down on the railroad, and we had to walk around it. They were removing it, and I am perfectly sure you could not guess how they removed it. They had five or ten thousand people engaged in removing that great mountain that has slid down upon the railroad. Each one had a little bucket, and a little shovel, and they were running in and running out, and they were doing that by the thousand; and they did it in a very short time. I saw a man who with his mother-in-law and his wife were digging up a ten-acre field, and I am not sure but that I saw the jackass hitched. In some cases I have seen the cow and the wife hitched up together, and I have also seen woman and a dog hitched up, and hundreds of times I have seen it in Belgium and Brussels and Berlin. This is an extremely interesting subject, and I really think that was a most delightful paper, and I would like to talk about it for an hour if we had time.

Dr. Chamberlain: I couldn't account for Dr. Brown's speech until he said he had forgotten so much. Now you see I just came from there, and I didn't have time to forget, and I don't know anything left now except for Dr. Brown and myself to step out here and settle.

#### DAIRYING.

By Prof. Oscar Erf, O. S. U.

Dairying in American agriculture is fast becoming a necessary adjunct because of its usefulness in retaining and restoring the fertility of the soil, and because it is the source of the cheapest and best of human foods. If we remember in connection with these conditions that the dairy cow has become the foster mother of four-fifths of the infants born, we more clearly realize the importance of this line of work.

Dairying has always been a very unpopular line of work. When we think of the dairyman there come to us visions of getting up at four o'clock in the morning, working hard all day and not stopping until eight or nine o'clock in the evening. There come to us visions of daily toil, Sunday as well as week days, holidays, days which are stormy, days which are cold as well as days which are warm and full of sunshine. There come to us visions of the uncertainty of the profits which each and every animal may make for us. There come to us visions of the frequent visits of the inspectors, who investigate every nook and corner to the fullest extent, dictating the policy that they wish to have carried out—the policy that everything must be scrupulously clean. There come to us

visions of state laws and regulations regarding the quality of milk and of cases where the cows do not perform according to these regulations. We learn that it is necessary for the dairyman to provide for conditions that will bring up the solids in milk to a certain standard or suffer a fine. There come to us visions of the recently discovered ways of determining filth in milk by bacterial contamination, and there stares us in the face the condition which demands that we know something about bacterial science, and now and then there come visions to us of the milk inspector's securing a sample of milk from the dairy and subjecting it to competition with the samples of many other dairymen who supply milk in that community. There come to us visions of other undesirable conditions too numerous to mention, but, why should this be so?

Since this business has come to stay and since it must be the ultimatum of the average American farmer, I believe that it is high time that we should throw away these old customs that were established in days when nature had bountifully supplied us with soil fertility and with feeds which made it possible for us to produce dairy products at a very low figure. Times are changing, and we are glad to say that instead of its being necessary for a man to be up at three or four o'clock in the morning in most cases, he is not obliged to be up until five or six to begin his day's work, and after the cows are milked and fed and the stables cleaned, instead of going to the fields to do a day's work, as was the custom formerly, the modern milker goes home to his family, where he reads the paper and makes his daily estimates. At one or two o'clock in the afternoon he returns to take care of his cows and finishes his work at six o'clock.

The milker, years ago, besides working in the fields, was obliged to milk from sixteen to twenty cows in the morning and evening, being paid for his labor the munificent salary of sixteen dollars per month. Today a man takes care of fifteen to eighteen cows, with no field work, at a salary of forty dollars per month. I shall welcome the day when every farmer has enough cows for one man to attend; when he has a neat, clean barn with clean surroundings for fifteen to eighteen cows, which number should be kept on every well managed eighty-acre farm.

I shall welcome the day when the farms will be divided into smaller tracts, and those tracts cultivated more intensively. This necessarily means more knowledge, good dairy systems and an economical source of food supply. The question is often asked: With what logic can the assertion be made that the cow is the cheapest source of animal food supply? Whenever this question is presented, comparisons must be drawn with her sister, the beef cow, which supplies food probably more economically than any other meat animal aside from the hog, not taking into consideration the fish, which will ultimately be the cheapest source of meat.

An average good cow should produce at least six thousand pounds of milk per year. This milk according to the standard must not contain less than twelve per cent. of milk solids, and since there are very few cows that produce a milk that is of poorer quality, there is, within the average cow's yearly production, about seven hundred and twenty pounds of dried milk solids, every ounce of which is digestible, and the most perfect food for man's consumption.

Compare the decided advantages and the amount of food furnished by the dairy cow with that furnished by the beef cow which produces a calf once a year. The calf is reared, and if it gains an amount equal to what the cow produces in milk solids, then we would assume that the calf would weigh from seven hundred to eight hundred pounds. Should the carcass be dried, and if it were possible to put it in an edible form, we would find in the calf from seventy-five to ninety-six pounds of dry matter.

If we consider it from a commercial standpoint rather than a theoretical, we would be obliged to deduct the offal in dressing the carcass. We would have to consider the trimmings and evaporation lost in cooking and the waste at the table, which, taken into consideration, would leave us, for every seven hundred pounds of meat consumed, about ninety pounds of actual edible material. However, this is not dried material, and since fried meat generally contains from fifty to sixty per cent. of water, depending upon conditions, we would necessarily have to figure to have this in direct proportion with the dried milk, that the sister beef cow hardly ever produces more than forty pounds of actual material that is consumed as human food.

This is the reason that in the densely populated districts of Europe the dairy cow plays such an important part in supplying food for the people. There are sections of Europe that must support from four to five hundred people per square mile. The average person in these countries cannot afford meat upon their tables two or three times a day, as a matter of fact, once a week is all that the average layman throughout Europe can have. Milk and grains are the chief articles of diet.

The cow is capable of performing this phenomenal function of economical food supply and she performs another function which, in conjunction with the food supply, is very important, namely, she has the power of converting much of the rough and undesirable grains raised upon the farm into milk, while at the same time she furnishes in the shape of by-products and manure, which can be hauled back upon the farm to fertilize the fields to grow more grain.

To illustrate this we will consider several practices in agriculture as, for instance, wheat growing. For every ton of wheat that a man sells from his farm, he is bound to lose some fertility. According to analysis reported in most instances, his loss of fertility amounts to eight dollars and sixty cents for every ton sold. If in the same way we consider corn farming, for every ton of corn sold there would be sold approximately six dollars and fifty cents' worth of fertility. Should these feeds be converted into dairy products, such as cream or butter, for every ton of butter sold (which is usually worth from eight to ten times as much as the wheat), but thirty-six cents' worth of fertility will be removed from the farm. Illustration after illustration can be given along these lines to prove the accuracy of these statements. If the commercial value of a ton of wheat be estimated at seventy-five cents per bushel and the commercial value of a ton of butter be estimated at twenty-five cents per pound, then for every hundred dollars' worth of wheat that is sold, thirty-four dollars and fifty cents' worth of fertility is removed from the farm, while for each hundred dollars' worth of butter that is sold only seven cents' worth of fertility is removed.

Many acres of worthless land in European countries have been made fertile by dairy farming. There are farms in the Atlantic states in our own country that have been abandoned because of their unproductiveness. These have been taken up again recently and with good dairy farming have been made as productive as they were in their original state.

The difference between wheat farming and dairy farming is explained in this way: Suppose a cow is fed a ration of alfalfa hay and corn, both of which can be raised on the farm, the cow assimilates and digests approximately ten per cent. of the fertilizing elements, the remaining ninety per cent. goes back to the farm in the shape of manure. Of the ten per cent. of the fertilizing elements that are removed by the cow, three-fourths go to make milk and one-fourth goes for the maintenance of the body.

In the case where butter is made on the farm and the milk separated, its analysis shows that ninety per cent. of the fertilizing elements of the whole milk

is found in the skim milk, which is returned to the farm and fed to the pigs or calves. Part of this is used for building up the body and the unassimilated part passes on to fertilize the soil.

It matters not what line of farming a man pursues, even though it be horticulture, it behooves the American farmer to practice a system of farming which is intensive and by which he can keep up the soil fertility. These are a few of the important matters that stand out vividly in dairying as a factor in American agriculture and with all these phases presented, one might ask: Why is it that dairying does not keep pace with the popular sentiments which are being continually agitated in other branches of agriculture? Many of us have not gotten away from our old methods of handling these modern problems, besides the price of the dairy product has not been raised to a degree corresponding with the price of meats and other farm products. Meats have practically doubled in value within the past five or six years, while butter to a certain extent has likewise doubled, still the most common dairy product, which is milk, has not been raised correspondingly. Milk five or six years ago in the average city was sold at six cents per quart, it is today sold at eight cents per quart throughout the large cities of the United States.

There might be another answer to this question and that is that there are too many poor cows which are kept at a loss and which help to flood the market, entering into competition reduce the price of the milk produced by the man who is trying to make a legitimate living out of the business. More knowledge is needed along this line, and if the future cows were kept in well lighted, well ventilated stables they would have a greater producing capacity, the tendency would be to raise the price of the products and to deliver a better product, owing to the fact that the competition would be lessened.

While we are discussing this particular phase of the subject we might refer to the present increasing sentiment that is prevailing over the country that the price of food products is too high. I make the statement from the chemist's standpoint, and from a practical standpoint, that dairy products have not reached their limit yet and are bound to go higher if other things keep correspondingly as high. I can assure the consumer that there is no trust or monopoly in the production of this product and that it is within the power of every man to secure a small lot of ground and to work into this business to see whether this is the case. This is not the desire of the average city laboring man because it is often considered as being beneath his dignity. If this is the case, and I assure you in many cases it is, he should then be willing to pay for his milk rather than to expect others to lower their dignities for his sake that he may purchase a cheap product. This sentiment in regard to dairying is all wrong. There is no nobler vocation; there is no more skillful work, and it requires a rare artist to produce a good bottle of milk at a fair price. We read about the poet and his skillful work. We read about the wonderful productions in the way of art. We read about the great mechanical skill which is displayed today in so many different ways, but these pale into insignificance when compared with the real artist who has the power to control life so as to make it respond tenfold.

It is said that he is a benefactor who can make two blades of grass grow where but one grew before; therefore I say that the man who can develop a cow so that she will produce from one thousand to one thousand two hundred pounds of butter in one year, where originally but one hundred and fifty pounds were produced, that man is a benefactor to mankind, a real artist and hero.

We are informed at times that agricultural education has done much to cause the disarrangement of the commercial problems, and that it is the chief cause of the increase in price of farm products. If this is the case, I believe that agri-

cultural education has had its right effect. Education tends to equalize everything, for it does not intend that one man shall wait upon the pleasures and the comforts of another. Education has a tendency to dignify any vocation.

At the present time throughout the country there are being organized anti-trust leagues, which I believe have a good motive in view and should be encouraged in every way; still it must be borne in mind that they will tread on sensitive ground, on ground which is very sacred and where they will do more harm than good. It has been the tendency in some cases to place their aim first, at the milk supply of the cities. I realize that there are thousands of people in this and other cities that are lamenting at the distressful conditions which these high prices on food products have brought to them; therefore I believe that it will not come amiss to give a complete analysis of the cost of keeping a cow for one year, their productions and the profits that are made. The first consideration in the cost is the feed problem, and we have selected as our basis upon which to calculate, four hundred and fifty cows from various herds which are profitable in their performances, and we have made the following estimates:

Cost of feed—

8 pounds bran at \$26.00 per ton-----	\$0.104
1 pound cotton seed meal at \$29.00 per ton-----	.0145
4 pounds corn at \$1.00 per cwt-----	.04
30 pounds silage at \$2.25 per ton-----	.03375
5 pounds corn stover at \$3.00 per ton-----	.0075
5 pounds clover hay at \$10.00 per ton-----	.025

Cost of ration per day for one cow----- \$0.225

Cost of ration 215 days for one cow----- 48.48

1 pound cotton seed meal at \$29.00 per ton, 5 months----- \$2.17

Pasture 5 months at \$1.75----- 8.75

\$10.92

48.48

Total cost ----- \$59.40

Cost of keeping a cow at the present time compared with cost 20 years ago—

	1909	1889
Cost of feed-----	\$59.40	\$22.50
Cost of labor-----	24.00	9.50
Interest on cow, value \$60-----	3.60	----
Interest on cow, value \$30-----	----	1.80
Allowance for deterioration by age-----	2.50	1.70
Allowance for death by disease-----	1.50	1.20
Allowance for failure to breed-----	.25	.25
Interest on cow barn-----	3.00	1.50
Bull service-----	2.00	2.00
General maintenance expenses-----	3.00	1.50
Hauling milk-----	2.16	1.20
Straw for bedding-----	2.00	----
Total-----	\$104.81	\$43.15

## Value of by-products from dairy—

Manure, 10 tons at \$2.75-----	\$27.50
Calf -----	3.00
Skim milk -----	16.00
<b>Total</b> -----	<b>\$46.50</b>
<b>Balance</b> -----	<b>\$58.31</b>

The feed cost in this table may seem rather high to the average farmer, but we must consider that the average farmer does not have profitable cows, consequently it becomes necessary to select animals that are profitable.

The item of labor as indicated here represents the cost per cow, in an average well-managed dairy. This item has been increased recently and it will be only a matter of a few years before the labor cost in keeping a cow will be thirty dollars or more. Gradually as the public demands a more sanitary milk, the labor in producing it will be greater because sanitation means skillful work in the dairy; therefore men of great intelligence are required and this necessarily becomes an item of increased cost. The public often accuses the board of health and the milk inspection department for the stringent requirements, as the cause of raising the cost of this commodity. It must, however, be borne in mind that whatever food article is produced, should be produced in a clean, sanitary way; therefore it becomes necessary from the standpoint of good health that more rigid inspection and more thorough inspection should be carried on along dairy lines, even though it may cost more, for health should be the ultimate goal at which we aim.

As the requirements are raised, the cost of housing and caring for the animals will increase, and for this reason I believe that the extreme limit of the cost of production has not yet been reached. It will be seen by the table that twenty years ago it cost approximately two-thirds less to keep a cow than it does today, but at that time the manure problem in many cases was of little value, because nature's abundant supply of fertility had not been so thoroughly exhausted as it is today in many cases. Even though we eliminate this factor the cost of production at that time was much cheaper than it is today.

## Cost of producing butter fat today as compared with twenty years ago:

	1909	1889
150 pounds butter fat, cost per pound-----	\$0.389	\$0.288
200 pounds butter fat, cost per pound-----	.291	.215
250 pounds butter fat, cost per pound-----	.233	.173
300 pounds butter fat, cost per pound-----	.194	.154
400 pounds butter fat, cost per pound-----	.146	.144

## Cost of producing milk today as compared with twenty years ago:

	1909	1889
3,000 pounds milk per cow, cost per gallon-----	\$0.210	\$0.124
4,000 pounds milk per cow, cost per gallon-----	.157	.093
5,000 pounds milk per cow, cost per gallon-----	.126	.074
6,000 pounds milk per cow, cost per gallon-----	.105	.062
7,000 pounds milk per cow, cost per gallon-----	.095	.053

The above table shows the relative cost of producing a pound of butter fat and a gallon of milk according to the producing capacity of the cow. Within cer-

turn limits the cost of keeping a cow is approximately the same. It is our aim to show this limit, which is from three hundred and fifty to four hundred pounds, as the highest limit, and one hundred and fifty pounds as the lowest and which is the average yearly production of the cows of Ohio. We show the same conditions in the case of milk. Possibly it would require somewhat more feed to make a cow produce seven thousand pounds of milk than four thousand; however, the comparative difference is very small. Three hundred and fifty pounds of fat and seven thousand pounds of milk is not the limit which cows can be made to produce. Colantha Fourth's Johanna produced nearly twenty-eight thousand pounds of milk and nearly one thousand pounds of butter fat in one year. If she had required no more feed and care than the average cow, she would have produced a gallon of milk for two and two-tenths cents, or a pound of butter fat for a little more than one-half cent. However, it requires more feed than we have estimated for a cow of such capacity, although the feed problem was of little importance compared with the skill that was required to develop the cow to produce this quantity of milk. Men who can do this do not work for forty dollars per month, but can easily command a salary of one hundred and fifty to one hundred and seventy-five dollars per month. Hence, if we assume the cost of producing the milk beyond the figures given in the table, the factor of skill comes in, which in some cases is very expensive and must be paid for.

Therefore, under average conditions, the most economical proposition for the farmer at the present time is the three hundred and fifty pounds fat or the seven thousand pound milk producing cow. Dairymen are often accosted by the consuming public with the question that if a four hundred pound cow can produce one pound of butter fat at one-half the cost that a two hundred pound cow does, why do the dairymen not keep four hundred pound cows? This is a very logical business proposition and it is here that the successful dairyman at the present time makes his biggest profit. The average man cannot procure these cows, for four hundred pound cows are limited in number, and if it is possible to purchase them a higher price must be paid for them. It requires years to produce and develop a good cow.

Since the factor of cost enters into this problem the rate of interest must be increased, which in turn must be applied to the milk. All dairymen would like to own better cows, but it requires just a little more skill to maintain a four hundred pound cow than it does a two hundred pound one. At the same time a four hundred pound cow being more sensitive, is more liable to be ruined than a two hundred pound cow. All these conditions enter into this problem in increasing the cost of production.

The safest thing for the farmer to do today is to keep fewer cows but keep those that are of high producing capacity, rather than to keep a great number of cows on which he loses money. For illustration, a man owned twenty cows and he had among these cows three Jerseys. These three Jersey cows produced on an average three hundred and twenty-five pounds of butter fat per year at a cost of about eighteen cents per pound. The remaining seventeen cows were Shorthorns, producing about one hundred and fifty pounds of butter fat per year at a cost of approximately thirty-nine cents per pound. This butter was sold for twenty-nine cents per pound, which has been the average price during the past year. The three Jersey cows made him a profit of one hundred and seven dollars and twenty-five cents, while the seventeen cows producing one hundred and fifty pounds, lost him two hundred and fifty-five dollars. The twenty cows as a whole lost him one hundred and forty dollars. Had this particular man sold his seventeen cows and spent his extra time and a little extra feed on his three good cows, housing them in a nice, clean, sanitary place, he would have

prevented flooding the market with two thousand five hundred and fifty pounds of butter fat, on which he lost ten cents per pound, and which tended to reduce the price of the commodity, and kept just the three Jersey cows, he would have made money instead of losing it.

If farmers would figure their expenses more accurately, keep fewer cows and better ones, and not flood the market with cheap, unprofitable milk, the cost of production would necessarily be lower and the price of the product higher. While this problem pertains only to the producer, nothing has been said with reference to the dealer, or in case there is no dealer, between the producer and consumer in regard to the cost of distribution. This is no small item. In fact, it requires skill to make both ends meet at a cost equal to that of production. The following table shows the cost of distributing a quart of milk:

Cost of distributing a quart of milk, based on a three hundred and fifty quart route or the maximum quantity to be delivered by our wagon:

Labor .....	\$4.00
Cost of wagon and horses.....	.68
Transportation .....	1.20
Bottles .....	.45
Coal and ice.....	.96
Caps .....	.20
Soap .....	.31
Laundry .....	.40
Cost of collecting and office work.....	2.05
Repairs .....	.50
Wear and interest on machinery.....	1.80
Interest on building.....	1.60
<hr/>	
Cost to deliver 350 quarts.....	\$14.15
Cost to deliver 1 quart.....	.04

This cost is only contingent upon the fact that the distributor sells all his milk. Since the handling of milk by the retailer is based on the fact that he purchases all the milk that the producer makes regardless of the quantity, at a given price, there will be two fluctuating problems to contend with, the consuming end as well as the producing end, and as a rule when the production is light the consumption becomes heavier, hence the dealer is obliged to buy milk in such quantities as to supply him during the low production period of the year. This necessarily will give him a great surplus during the period of high production, consequently this surplus must be turned into butter at a much lower value and the skim milk must be disposed of in various channels, at a great cost. Hence the distributor, to be on a safe basis, must put a valuation on the milk close to that of the butter fat prices plus the small margin, not to exceed twenty cents per hundred, on skim milk.

If the producer would sell a more uniform quantity of milk to the distributor, the distributor could naturally pay a higher price for the milk. Hence this is one of the great factors that increase the price of milk. There are, however, other items which could be reduced if the consumer were more conservative, as, for instance, the prompt payment of accounts, place of business, the care of bottles, etc. Therefore the consumer is confronted with these problems which positively cannot be overcome if the consumer desires the comfort and the con-



venience that is afforded him today. He must necessarily pay a price which is high in comparison with the cost in the past, but which is cheap in comparison with any other foodstuff.

A quart of milk is equivalent to three-fourths of a pound of steak, one-half pound of bread, six quarts of oysters in nutritive value. Considering the food value of milk we find that we can get the greatest amount of nutrients for the least amount of money, and even though the price of milk should advance to ten or twelve cents per quart, which the average citizen must expect in the near future if the price of feed and labor are to be kept on a par with the present conditions.

#### Discussion.

Dr. Brown: While the professor is on his feet I want to challenge him to give an instance of beef cattle that have had to have dairy cows nurse their calves.

Prof. Erf: The only case I can recall is on the fair ground. You will find from 50 to 75 nurse cows in the back of the tent where the beef cattle were, and I believe I have seen quite a good many of them on the farm.

Dr. Brown: I simply want to explain that by saying that these beef calves that are being nursed by dairy cows are calves that have nursed their dams until their dams are well along in uterogestation, and they want to continue the growth of those cattle in order to contest in the show ring, and the beef man who does that believes that the cheap dairy cow is probably the cheapest way of keeping that calf, because it only costs a little per month to keep a cow to keep the calf, whereas if you give the dry feed to the calf, it would cost three or four times as much as it does to keep the dairy cow. I don't know of any beef cattle that didn't give milk enough to nurse their calves.

Prof. Erf: Allow me to ask Dr. Brown whether it is an economical proposition, whether it is profitable? I am talking from the standpoint of economy.

Dr. Brown: I will answer by asking a question. Is it germane to the subject from an economical standpoint to make the statement that beef cattle must have a nurse cow of the dairy breed to keep them growing?

Prof. Erf: I just simply wanted to reinforce my statement.

The Chairman: I am sorry we have to discontinue this interesting discussion. I think you all appreciate it.

Adjourned at 5:10 p. m.

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#### WEDNESDAY EVENING SESSION.

Music.

Called to order by the President.

The President: We have a subject that ought to interest every person present here tonight, "Economy in Animal Production." Now

they tell us that the eye of the master fatteneth his cattle. I was down at the Experiment Station, and being interested in the live stock I visited the live stock section there, and I want to tell you publicly that the best herd of cattle, and the best herd of hogs I have seen in the last five years I saw on those grounds; some of the best lambs I have seen in recent years I have seen at the Experiment Station in the last two weeks. There is a master mind there, and he is here with us this evening. He knows his business. That is the kind of man we like to have with us.

### ECONOMY IN ANIMAL PRODUCTION.

By Prof. B. E. Carmichael, Wooster, Ohio.

Animal production occupies an important place in modern agricultural practice. The total value of animals sold and slaughtered and of animal products, at the farm in the United States in 1908, was given by the Secretary of Agriculture in the 1908 year book of the United States Department of Agriculture as about three-eighths of the value of all farm products, that is, close to three billion dollars. With such an enormous amount of money value involved it is evident that the matter of economical production is of more than passing importance, not only to people on the farm, but to also the city dwellers who purchase and consume a great portion of the animal products of this country. Advanced and still advancing prices for milk, butter, meat, eggs and other animal products make the matter of economy in animal production one which concerns all, for who is there that does not use milk, butter, eggs or flesh for food, and wool and leather for clothing, to say nothing of the various smaller items that, while small in themselves, unite to form an enormous aggregate? To the man who keeps live stock, economy in animal production means greater net profits; to the consumer it means lower, or at any rate, a less rapidly advancing cost of living; and to our country as a whole, it means greater prosperity and comfort for all by increasing the available amount of foodstuffs—either animal products or other material that, under more wasteful methods would have been used, or rather wasted, in animal production.

Economy in animal production does not necessarily mean low cost of feeds used in animal production, but, rather, such methods applied to animal production as will do away with all waste. Economy in animal production should take into consideration both the producer and the consumer, as both are vitally affected by the cost of production and, if this is needlessly high, both the producer and the consumer will suffer, the one on account of lessened profits, the other by reason of increased cost of living.

Early in the history of this country and, indeed, until relatively recent years, it was, as a rule, not especially difficult for the man engaged in animal production to realize a fair profit from his operations, nor for the consumer to secure such animal products as he required at a moderate cost. Increased cost of feedstuffs, due to a greater demand from consumers, has raised the cost of animal production to such an extent that even with the high prices that now exist, many producers fail to realize a fair profit, and consumers find prices so high as to be almost prohibitive.

What are some of the ways in which animal production may be made more economical, or, in other words, what are the causes of the wastes that prevail?

To answer these questions in full would require days instead of the minutes that are available for this discussion tonight. However, a few of the items of waste may be enumerated and discussed very briefly.

Indiscriminate breeding or lack of intelligent selection on the part of breeders is one cause of great wastes in animal production. If the greatest possible efficiency in animals is to prevail, breeders should practice intelligent, persistent selection. It is a deplorable fact that the herds and flocks on the average farms of Ohio do not show much evidence of this kind of breeding. In herds of cattle, it is often true that Jersey, Guernsey, Holstein, Hereford, Shorthorn and Angus blood is mingled in a promiscuous confusion. Instead of making a study of environment and of markets and breeds that are well adapted for meeting the demands of both, breeding operations are often carried on in a haphazard way, without any apparent attempt to breed uniform, efficient animals that are suited for the kind or kinds of production that should be expected to yield the most profit. What has been said of cattle breeding applies with equal force to other lines of breeding. The common horse stock of this state is mongrel, notwithstanding the fact that sufficient good blood to stock Ohio with high class market horses has for years been available for the use of Ohio breeders. Horsemen should breed horses that are suitable for the special uses for which horses are needed these days. It is not economy to mix breeds and types of horses, for the offspring of such matings will not meet with a heavy demand nor with high prices, because they do not satisfy the requirements of horse users. Enormous wastes along this line, not only with horse and cattle, but with other stock, occur annually, and it is high time that the breeders of Ohio begin to put their operations on a basis that will make Ohio live stock the equal, if not the superior, of any stock in this or in any other country.

The selection and persistent use of any special breed of live stock does not do all that may be done in live stock breeding. It is a fact that there are many pure bred animals in Ohio that are for all practical purposes nothing more than pedigreed scrubs, and pedigreed scrubs are the most dangerous scrubs in existence. The selection of pure bred or of grade stock for breeding purposes should be put on a utility basis, rather than a fancy point or fancy pedigree basis. While it is very desirable to develop the highest degree of beauty that is consistent with utility, yet it should be remembered that beauty is a relative rather than an absolute term, while utility is absolute. There is probably no class of stock to which the above applies with more force than to dairy cows. While high degrees of both beauty and utility are very frequently found in the same animal and, therefore, are not necessarily antagonistic, yet beauty does not guarantee utility. It is very fortunate that with dairy cows it is an easy matter to select for utility. Scales, milk sheet and Babcock test are available for the use of every dairyman and have done much to make dairy production more economical. The importance of selection for utility is evident when this work is once undertaken. Total production and net profit are widely different. Net profit, rather than total production, should be considered when utility is sought. Unfortunately no simple method of determining the relative efficiency of various individuals in horses or in meat producing animals is at hand. However, close observation and the keeping of such records as are possible will do much to eliminate the unprofitable animals.

In this connection something should be said of fads and fancy points in breeding. Much time and valuable material have been lost in breeding operations on account of too much attention being given to points that have no real value. Valuable animals—animals of high utility—have been sent to the shambles on account of some lack of fancy color, coat or style. Many so-called breeders pay more attention to the shape of ear or horn or coat of hair than to vitality,

longevity and fecundity. The "red craze" was a handicap from which Short-horn cattle have not yet fully recovered; Poland-China swine have suffered in the hands of some because their breeders too frequently selected breeding stock on account of a fancy ear or six white points and too seldom on account of vigor, constitution and the ability to produce large litters of even, early maturing pigs. Just why a careful breeder should value a black tongue in a Jersey's mouth above the ability to yield well at the pail, is hard to understand. Other breeds have suffered or are suffering similarly. This does not mean that no attention should be paid to uniformity and appearance, but that more attention should be paid to utility. There is now evidence of saner methods in breeding, and animals that have established their value as breeders or that give promise of proving useful are frequently retained, even though some foolish fad or fancy point that was formerly seriously considered is lacking.

Community breeding, that is the adoption of one breed of a given kind of stock by breeders within a certain locality, would do much to raise the quality of farm stock, and to increase the profits from it. Contrary to the impression that seems to prevail pretty generally, it is not to a man's disadvantage to have the same breed of stock that his neighbors have so long as all are suited for the uses to which they are to be put, but rather it is to the distinct advantage of all. Co-operative study and work will do much to develop high class stock in a community. Whenever possible, breeding stock of high excellence should be secured close at home rather than at a distance, not only on account of the economy of such a course in regard to first cost, but because it gives the breeders an opportunity to see the animal under conditions that are similar to the ones under which it is to be kept.

Breeding, while it occupies a place of great importance in animal production, cannot do all that may be done to make animals more useful to man. It may and does supply the possibility of increased production and profit, but other factors are of great importance. An intelligent use of feeds is essential to the greatest profit from animal production. The wastes in this direction are enormous and should be done away with by thinking feeders. Intelligent feeding is impossible without an understanding of the needs of animals and of the character of the feeds that are available. It is a fact that many feeders throughout this country fall far short of securing maximum or even satisfactory returns from their feeding operations, and very frequently on account of the misuse of feeds. An intimate knowledge of chemistry and of the various processes concerned in animal nutrition, while very helpful, is not absolutely essential to the intelligent feeding of live stock. It is, however, very important for the feeder to have some rather definite knowledge concerning the needs of his animals and concerning the feeds that are available for his use. Rations that would be suitable for work horses would not always give good results if used for milch cows, and the best ration for one cow might not be the best one for another cow. Animals that are growing or that are pregnant or producing milk require more of protein and of mineral elements than do animals that are mature and being fattened or kept for work purposes. On account of the high cost of protein in feeds, more than an adequate amount should not usually be given. Corn can well be used, if used judiciously, for all kinds of live stock, and on account of its great abundance and efficiency will doubtless long continue to enter largely into rations used for Ohio stock, but it is important that corn be used intelligently. For animals that yield milk, for stock that is growing, or for pregnant animals, a feed or feeds richer in protein and ash than is corn should be used. Pasture grass and green feeds of various kinds, alfalfa, hay, clover hay, soybean silage, skim milk, bran, middlings, linseed oil meal, cotton seed meal, gluten feed, distillers' grains, meat

meal, tankage and other feeds may be used. Some of these feeds are not suitable for all kinds of stock and a careful choice is essential if best results are to be secured.

Home grown feeds are in higher favor with many farmers than are commercial feeds. Any arbitrary statement as to whether home grown or commercial feeds are best cannot be given, as market prices and other considerations vary greatly. Feeders should so manage their farms as to produce the greatest possible value in crops and should then feed home grown feeds exclusively, commercial feeds exclusively, or a combination of the home grown and the commercial feeds, whichever will yield the greatest net profit. No definite rule can be given that will be safe to follow under all conditions, since the considerations that would be most important—that is, market conditions—vary too greatly to conform to any arbitrary rule. The teaching, "Feed all you raise," is surely unwise, as is also the teaching, "Raise all you feed." Animal production should be put on a business basis, the aim being to utilize raw materials—that is, feeds—to the best possible advantage, and to secure the greatest possible net profit from the business. It is frequently possible to utilize cheap feeds very extensively and thus materially lessen the cost of production. However, there is danger of going too far in this direction and lowering the rate of production to such an extent that the net profit from the total production would be very small. It is possible for products to be made so slowly on feeds of low cost that very meager profits will result from a given feeding period, just as it is possible for rapid production to be so costly that it would yield little, if any, profit. Very frequently rapid and cheap production are associated, and this is a combination that feeders should endeavor to obtain.

In the selection of feeds it is important for the feeder to know the relative values of the feeds that are available. Much information along this line may be secured from the various Experiment Station and United States Department of Agriculture bulletins. In the case of commercial feeds, reports of official inspection of feedstuffs offered for sale in the state are invaluable. All of these publications may be secured free of charge. The work of official inspection of feedstuffs is of great importance, and the results secured in this work should be in the possession of every feeder of live stock. Adulteration of feeds is practiced to an astonishing extent; for example, a feed dealer was recently heard to say that a traveling salesman had visited him to secure an order for peanut shells to use in adulterating middlings; and it may interest you to know that very fair looking middlings may be made up largely of this adulterant. Corn cobs have been used to adulterate bran, without detracting from its appearance. Oat hulls, sweepings and ground corn stalks have been used to adulterate feeds. It is unfortunately true that adulteration, and very extensive adulteration, of feedstuffs may occur without much danger of detection, unless the feeds are analyzed. This inspection should be continued and extended until there is no chance for deception in the sale of feeds, and heavy penalties should be administered to manufacturers or dealers who put worthless feed on the market, to the financial disadvantage of all concerned, except themselves. Counterfeiting feed is as much a crime as is counterfeiting money, and should meet with severe punishment.

While economy in the purchase of feed, and this involves a consideration of both character and cost of feed, is necessary, it is equally true that great care should be exercised in the utilization of home grown feeds, whether they are used alone, in combination with each other, or in combination with commercial feeds. Table I shows the results that were obtained at the Ohio Station from five different rations, the feeds in all of which were farm grown. It will be

noted that great differences in rate and cost of grains resulted from the different rations.

TABLE I.  
Farm-Grown Supplements for Corn.

Rations.	Ground Corn and Skim Milk, Dry Lot.	Ground Corn and Ground Soybeans Dry Lot.	Ground Corn, Dry Lot.	Ground Corn, Mixed Pasture.	Ground Corn, Clover Pasture.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Average initial weight per pig .....	97.	91.8	94.1	94.8	94.6
Average final weight per pig .....	208.5	181.	149.3	183.6	193.3
Average daily gain per pig .....	1.80	1.44	1.89	1.43	1.59
Corn consumed daily per pig .....	5.2	4.5	4.7	6.1	6.2
Supplement consumed daily per pig .....	15.5	1.1			
Total feed (aside from pasture) per 100 pounds gain .....	*288.1 †860.8	*312. **78.	530.	426.	388.
Pounds pork per bushel corn, with corn at 56 cents per bushel .....	13.4	13.0	10.5	12.6	13.8
Pounds pork per bushel corn, with corn at 70 cents per bushel .....	14.3	13.8	10.5	12.7	13.9

\*Corn meal.

†Skim milk.

\*\*Soybean meal.

Skim milk 15 cents per cwt., soybeans 90 cents per bushel, pasture \$4.00 per acre for 62 days. (1-8 acre used for 3 pigs.)

An experiment conducted to compare corn and oats as grain rations for use in connection with mixed clover and timothy hay for mature geldings used for general farm work, showed a very material saving in cost of maintenance when corn was used, rather than oats. This saving was effected without any lessening of efficiency of the horses. The results of the experiment, which lasted for forty-eight weeks, indicated that a pound of well dried ear corn was equal in feeding value to a pound of oats, under the conditions previously mentioned.

TABLE II.  
A Comparison of Corn and Oats for Work Horses.

Summary of Feed and Work.

May 17, 1907, to April 16, 1908.

	Initial Weight	Final Weight	Gain or Loss in Weight	Feed Consumed			Total Cost of Feed Consumed*	Hours Work Done	*Cost of Feed Per Hour Work
				Ear Corn	Oats	Mixed Hay			
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds			Cents
Joe .....	1,555	1,535	20	4,937		5,980.25	\$52.96	1,487.	3.56
Jack .....	1,453	1,438	15		4,938	5,962.5	70.14	1,487.	4.72
Bill .....	1,493	1,486	7	4,984		6,006.5	53.34	1,430.5	3.73
Frank .....	1,470	1,473	3		4,921	5,647.5	68.72	1,419.5	4.84
Tom .....	1,527	1,545	18	5,064		4,144.25	46.37	1,715.5	2.70
Dick .....	1,349	1,389	40		5,036	5,845.5	70.59	1,706.	4.14
Total corn fed ...	4,575	4,566	9	14,985		16,131.	152.67	4,633.	
Total oats fed ...	4,272	4,300	28		14,895	17,455.5	209.46	4,612.	
Average corn fed ..	1,525	1,522	3	4,995		5,377.	50.89	1,544.3	3.30
Average oats fed ..	1,424	1,433	9		4,965	5,818.5	69.82	1,537.5	4.54

\*Corn 40 cents per bushel, Oats 30 cents per bushel, Hay \$8.00 per ton.

Very frequently an extensive use of a cheap feed will lessen the cost of production. The use of pasture grass, clover, rape or other similar feeds in the

place of a part of the usual grain rations in pork production is a case of this kind. There is danger, however, of so marked a decrease in the rate of gain as to effect profits very materially if this substitution is carried too far. It should be remembered that net profits, as well as cost of feed, need to be considered. In the case of young stock it is very often true that they actually weigh less after being carried through an entire winter than when taken from pastures in the fall. It is very seldom, almost never, good business practice to allow young stock to lose in weight or merely to maintain a fixed weight. Feed expended in this sort of feeding is unproductive, and, therefore, wasted, without being of use to anyone.

Unnecessary labor is often expended in care of stock. Sometimes this is due to lack of care in planning buildings and other equipment. Very frequently labor is wasted in preparation of feed for stock. Good business judgment is required in deciding just how much labor may profitably be applied in animal production, and as much should be used as will yield a satisfactory profit. Too much capital may be invested in buildings and equipment. Elaborate accommodations are not often needed by live stock. Comfort, convenience, durability and good sanitation are essential, but further than this little is needed in the way of buildings and equipment. Capitalists who take up live stock farming as a plaything are likely to over-invest in this direction; the average farmer is very prone to try to get along with inadequate facilities. Both tendencies cause waste and should give way to a reasonable practice that will occupy a middle ground.

From the standpoint of the conservation of soil fertility, animal production occupies an important place. Time is not available for a long discussion of this phase of the subject. However, it is a well-known fact that an intelligent utilization of the manure produced by live stock will do much to restore wasted fertility or to prevent such waste. Manure from live stock should be intelligently saved and utilized. Manufacturers have long ago learned the importance of a careful utilization of by-products, and the best farmers have also learned that their by-products are of great value. The waste due to careless handling of manure is enormous and, if it could all be avoided, much would be done towards decreasing the cost of production and of living.

One of the large wastes that occurs in animal production is occasioned by contagious diseases. Hog cholera and bovine tuberculosis are the two of these diseases that are most frequently brought to stockmen's attention. It is hard to estimate the losses that occur annually from these causes. Much progress has been made within recent years in the prevention of losses from these diseases, by preventive treatment in the case of hog cholera and by sanitary methods in the case of bovine tuberculosis. Stockmen should use all known precautions to prevent loss in this direction. Director Thorne of the Experiment Station put it well when he said: "Were I the owner of a herd of cattle, I should as readily do without fire insurance on my barn as without the tuberculin test in my herd." Modern veterinary studies have made possible greatly decreased losses from contagious diseases; unfortunately for all, many stockmen are, on account of acquaintance with a few scoundrels in the veterinarian's profession, suspicious of the whole fraternity and unwilling to co-operate with them or to take advantage of the important discoveries that they have made. This attitude is unwarranted, and the stockman who refuses to avail himself of the best that scientific veterinarians have to offer, is checking progress and courting serious financial loss. There is no dearth of data in this direction, and there is but little reason for any man to proceed in his work without adequate protection. Legislation is almost sure to come in these matters, and the man who makes progress in this direction because he appreciates the need for such progress, rather than because the

law requires it, should and doubtless will realize a handsome profit from the results of his careful foresight. The waste that may come and does come from carelessness in regard to contagious diseases is enormous and has much to do with the low profits from production, and with the high cost of living. The financial loss to stockmen from tuberculosis in herds of cattle and swine has been estimated at fourteen million dollars per annum. Scabies in sheep and cattle, contagious abortion in mares and cows, glanders in horses, blackleg in cattle and other minor diseases swell the waste from wholly or partially preventable contagious diseases to an enormous total. The time is ripe for a campaign of sanitation and disease prevention. Stockmen will do well to inaugurate and regulate this movement and profit by it rather than to retard it and have it work to their disadvantage.

The demand for food for human consumption is increasing. Mankind must be fed and clothed. Animal production that will economically administer to the needs of man will continue to occupy an important place in the agricultural world. Animal production that really decreases rather than increases the comforts of life for the human race is not entitled to a place in agriculture, and cannot long occupy such a place. An intelligent consideration of conditions that must be met, and of methods of breeding, feeding and management that will best meet these conditions is necessary if the greatest possible economy in animal production is to prevail. No man has a right to cause waste in any direction, and never has had such right, and food suitable for man's use should not be wastefully used for other purposes. Utility should be the stockman's watchword. Waste of feed, capital, labor, animals or fertility should be, so far as possible, abolished, and careful intelligence should continue to displace ignorant carelessness until the greatest possible good for all will result from the vast animal industry of this country.

The President: You recognize this fact that you have a master mind to deal with, and you may ask him any question you want in regard to economy in live stock production. I think he is able to answer it.

Mr. Robbins, of Muskingum: I would like to ask the professor if he thought it would pay to feed tankage to hogs on clover, feeding out in the open field?

Answer: I cannot say exactly what the results would have been in feeding corn and tankage on clover. We have fed corn and tankage on mixed pasture, and the results have justified. That will depend on whether we are feeding heavy grain rations, but with corn at the present prices it would be good to use tankage.

Mr. Stabler: I would like to ask whether it is safe to feed tankage to brood sows, and in what quantities? I understand the quantities have to be reduced in feeding to brood sows.

Answer: There is quite a prevalent notion of that kind in that section. Just what the evidence is that justifies that is more than I know. At the Ohio Station we have fed corn and tankage in the proportions of eight pounds to one of tankage, with good results. We have not undertaken any comparison with other food. I do not know of any bad results, but our experiments will be continued.



A Member: At the Swine Breeders' Association last evening there was a gentleman present who said he did not consider it safe to give less than one part to twenty of the other feed.

A Member: Ten young sows raised for us eighty pigs for their first litter, and they had received tankage.

Mr. Dobbins, of Green: Right along this line we had eleven young brood sows that we were wintering on ear corn, ground oats, tankage and oil meal. I cannot give the exact proportion of tankage and oil meal. These sows received about half a gallon each. These eleven sows farrowed 124, and started 118, and raised 111 of those pigs to maturity.

Question: Was it their first breeding?

Mr. Dobbins: No, sir.

Mr. Carmichael: These ten brood sows really farrowed 112 pigs, and they raised 80.

Mr. Myers, of Holmes County: I would like to ask whether he has fed any cut clover or alfalfa to brood sows, and how many he would recommend to feed per 100 pounds?

Answer: We have never fed that. We have fed a little uncut alfalfa to hogs; and these sows we speak of received in addition to the tankage a little alfalfa hay. I think it is safe to feed all they will eat; they will not overeat.

A Member: Don't you think they would eat a great deal more if you cut, mixing with hot water, a great deal more than if dry?

Answer: A number of feeders do that.

Mr. Robbins, of Muskingum: I want to say that I wintered sows last winter where they could run to alfalfa grass. I never had any meal feed at all, and this last spring they all came stronger than I ever had pigs come before.

Mr. Blackford, of Preble: I want to know the relative advantages of buttermilk and skimmed milk, and whether buttermilk is injurious to brood sows. We had splendid results in farrowing period, started well, and out of 90 we saved 42. Pigs got to be three or four weeks old, plump and nice as they could be, and they died in spite of us. We lived near a creamery, and got the surplus of buttermilk. We feed it. It is fine for shoats and the pigs seem to like it.

Answer: As far as relative values, buttermilk and skimmed milk, there is no reason to believe there is much difference. Buttermilk is for all purposes skimmed milk that has gone through the process of ripening. As far as any damage resulting from buttermilk and skimmed milk, I don't see why there should be any. It is possible there was something in the buttermilk that did the damage.

The President: At Springdale we had a discussion where corn was fed with clover, what part of the gain should be credited to the clover, and what part to the corn. Can you give us anything on this?

Answer: I don't think I could do any better than turn back to the chart we had a while ago. I don't know how we could get at that absolutely. So much would depend upon whether or not we were feeding heavy grain rations.

Mr. Kemmell, of Butler: I would like to get at the price of soy-bean meal, and where it can be gotten?

Answer: Soy-bean meal at present time is pretty expensive to feed, I should have mentioned we could not afford to feed it as it is worth \$2.30 wholesale for seed, and oil meal should be as valuable as soy-bean meal. It is one of the home-grown beans that can be used.

Mr. Reed: Would corn and oats and oil meal be as good as anything you can feed?

Answer: I would say corn and oil meal would be better.

Mr. Reed: What have you against oats?

Answer: Too expensive.

Mr. Reed: They make bone, don't they?

Answer: It is possible they would grow some more bone than corn would. I have never used it. Experiments, however, have shown rather to disadvantage than to advantage. We had trouble one time with a lot of hogs we turned into the corn field. They seemed to reject the green corn rather than tankage.

Question: Did you use any salt and ashes?

Answer: Yes, but we find that hogs that are fed tankage care less for that than on corn alone.

Mr. Buckman: I would like to have corn rations for horses. In the line of brood mares and colts, does he think for mares producing colts he can afford not to buy oats and grain?

Mr. Carmichael: We have never done any work to compare the relative value of corn and oats for growing colts or brood mares. I don't think it would be necessary to feed either oats or bran to mares or growing colts, providing we have an abundance of good mixed clover and alfalfa hay. However, if corn and oats can be secured at prices to justify their use they would be a good thing to use, but I don't believe it is absolutely necessary to use either.

Mr. Ramsey, of Columbiana: I would like to know if it would not be better to feed the whole corn, all things considered, to most all stock, especially hogs, cattle and milch cows too?

Mr. Carmichael: Rather than feed the whole corn to hogs I think we should soak it, in light of recent experiments. In cases of horses, providing they have good teeth, I don't very much believe it is necessary. For dairy cows I am not so certain. It seems to me we could well afford to grind the feed for them.

Mr. Kennell: I would like to ask the professor how much tankage

would you feed to hogs that are following cattle that are fed corn silage and cotton seed meal?

Mr. Carmichael: We have made some tests in that direction, and we have fed as high as two-thirds pounds daily; two-thirds gives better results than one-half pound a day. How much higher we could go I could not say.

Mr. Brown, of Noble: I would like to ask whether hogs should be fed a full ration of corn or just a moderate ration when running on grass?

Mr. Carmichael: I do not believe that can be answered in any way that will apply to all conditions. If we are in any particular hurry to market, or if corn is high in price we can well afford to make use of pasture grass.

Mr. Brown, of Noble: If we use an abundance of corn they will eat but a very little quantity of grass, will they not?

Mr. Carmichael: We have been able to get them to eat quite a good deal of both. So much depends on market conditions, depends on the way they feel about hurrying the hogs to market. There is no possible way; it is a place where judgment must be used.

Mr. Brown, of Wyandot: Is there any relative value in cooking ground feed for young hogs?

Mr. Carmichael: So far as I know experiments have shown that cooked feed is no better than raw feed. However, in case of young hogs, and all hogs in cold weather, we get increased consumption of feed by warming the food. I do not think it is necessary to cook it. I do not think it is necessary to feed warm slop or possibly use water that is slightly warmed. I do not believe in feeding ice cold feed.

Mr. Kirk, of Ottawa: How much oil meal would you feel it safe to feed horses, especially to mares, and whether you have ever had any evil effects in feeding oil meal?

Mr. Carmichael: We have never had any experiments at all in feeding oil meal.

....., of Summit: A gentleman here inquired about the cause of his pigs dying. I had quite a little trouble of that kind several years ago, but I was feeding swill from the house mixed with dish water. I was very certain it came from that slop, because I had another lot that I didn't feed that, and I had no trouble. Very likely he got some of that Gold Dust or washing tea. They are often used about factories.

Mr. Rice, of Trumbull: I am a creamery man, and have fed hogs for over twenty years on buttermilk, and have found it better to add half water to buttermilk when you feed it to pigs.

Mr. Ebersole, of Pickaway: Is there any bad results from feeding ground feed like shorts and bran in dish water in which has been used lyes, washing teas and soap. My folks at home insist on washing dishes

with soap and sometimes use this washing powder, and I have been arguing against that at home, and they insist on doing it. When I go home, my wife and I get home, we will have a fight on that.

Mr. Carmichael: We cannot of course answer all questions when we are not acquainted with local conditions. I believe I would say this: If you cannot induce your wife not to use washing powder let her use it, and throw the dish water away. I don't believe an excess of soap is a good thing for hogs. Personally I don't like soap mixed with my feed, and I do not believe the hogs do.

Mr. Osnaberg, of Warren: Have you had any experience in feeding tankage to cattle?

Mr. Carmichael: We have not. In conversation with Mr. Ferguson, who has charge of the animal feeding for Swift & Co., he stated they do not have any use for tankage for anything excepting hogs.

A Member: What about cotton seed meal?

Answer: For hogs? Cotton seed meal if continued for a considerable time will kill hogs.

### INSTITUTE ROUND TABLE.

The President: I consulted with my associates in my work of selecting something that might be of some benefit. You will recognize that this is only a very small per cent. that is interested in institute work. We thought of this matter, and we concluded to ask the question, and get some of the best men in the state of Ohio to discuss it, and I want the stenographers to take all down, and put it in the Bulletin. We will show no partiality; we will start out as we began. We will get it all boiled down. We want you people to do that tonight, and we are going to limit everyone to five minutes, not a minute more. Don't feel offended if I rap you down, because I have to do it if you go over your time.

### WHAT CONSTITUTES A SUCCESSFUL INSTITUTE?

Those appointed to lead on this question are: Messrs. Chamberlain, McIntire, who is not present; Drake, Montgomery, Brown, Dean, Baker and Bailey. As we talk about this first question, we would like to know something about that, and we are going to call upon the father of institute workers in Ohio, and as far as I know in the United States, Dr. Chamberlain.

Dr. Chamberlain: Mr. Chairman, I think that a successful institute is one in which the whole audience works with the speakers, side by side, from start to finish. The worst thing for an institute that I have met everywhere this year is the tardiness of the farmer. If they were going to take a railroad train they would get there. One of the best

institutes I attended, except for that when the time to begin came, there were 24 there. In the evening there were 450 there, 100 of them standing. What can you do? We waited nearly a half an hour, and then the preacher prayed awhile, and the choir sang awhile, and finally they put me on to break the ice so the others could jumble in, and while I was speaking 150 came in, and in the first five minutes I spoke in confusion, and those that were not there in the beginning lost the whole thing, and those that were there in the beginning couldn't hear. What can we do in a case like that? I tried to shame them. You can't excuse them by saying it took the time to do the chores; it was just as bad in the afternoon. They came to town, and they dribbled in all the time. You will think I am scolding the farmer. I tell you you will never have the best institute until you wake up the farmers, and get them to come early just as they would if they were going to take a train; they would get there in time if they had to. I have tried to shame. I tried to shame them by telling them the story of President Cleveland, the big fat man. He went puffing to catch the train, and saw that delightful object, the rear end of the train, vanishing, and puffing he said, "I didn't run fast enough." And an Irishman jovially said, "Please, sir, you ran fast enough, but you didn't start soon enough." The trouble with the farmer is he don't start soon enough to these institutes. I wish the secretary in his report would rub it in on them, and make them see their duty in this matter. The next thing in regard to the speakers. I think the speakers ought to always give the underlying philosophy of what they undertake to say. They should give the reason why. They should not only tell them when and where and how, but why. Giving their practical experience is all right, giving the sciences is all right.

The professors of our agricultural colleges fail, if at all, because they don't give the proper application. The farmers fail because the speakers don't tell why, because they simply tell how they drain and where they drain, but they don't tell why. Why is it so on my farm, why should it be different on another farm, which are the underlying principles?—so all the way in that way. Well, shall we have any fun at all? I do not object to a story if it will clinch anything, but to string a lot of stories together with no connection is perfect folly. I think the colored man's explanation of how he preached may be a basis for us. "In the first place I 'splains the text; and the next place I 'spounds the text, and the third place I puts in the rousements." So that when a man goes away that he shall know more, and be prompted to do better.

Shall we have night sessions? Yes. Education for the children, for the wives, for the home, and the social matters for giving information along these lines. In some states it may not be best. In Ohio, yes, unless we are unwilling to grant that our wives and children are of less importance than our mares, our cattle, and so forth. If they are willing

to come, hold a night session. In heaven's name give them one session where they will learn something about the home and successful life on the farm. If they are willing to listen to things like hauling out manure give them one session for the home. I think at that session you should not have a high school exhibition; that kills the whole business. I think if there are two state speakers, and if one can give a popular lecture, let him do it, and the other give a practical talk on botany, seeds and so forth.

Dr. Brown: I can tell all I know about it in less than five minutes. My attitude toward this matter is very much like a scholar who was asked to define a term that was not very usual. He said he knew what it meant very well, but he didn't have expression in his vocabulary to convey it. It is a very easy matter to say what part of an institute could have been left out to advantage, and it is also easy to say what part of an institute meeting elicited the most interest, which is to say, that that part which elicited the most interest was the most successful part, and it also is as much as to say that that which was of local interest elicited the most attention. I have seen speakers who have employed the best language, have manifested the deepest learning, have exploited subjects most painstakingly and accurately, and no interest manifested. No matter how painstaking and how interestingly a subject is presented if it does not appeal to the local mind it is not of large benefit. You can take the most finished lecturer that it is possible to find, and let him teach a subject elaborately, scientifically, something that will carry away the learners that have had experience as learners, and those few will be interested because there are only a few of a large audience that are experienced learners, and when you look around under those conditions, even though you are carried away by the magnificent interest, you will find it is falling on deaf ears, but if you take something of simple character of local interest, you immediately arouse a response. Having arrived at that point, and being limited to five minutes, it behooves me now to contribute my part to this subject, that is my part of the suggestions that are to be presented out of which a good institute be made.

I have always thought that good teaching depends upon two particular elements, one is that the speaker should have the power to get immediately into confidential touch with those who were listening, and then have the quality of conveying in simple, fundamental language, simple, fundamental things to an audience that is anxious to acquire knowledge, but that has had no large experience as students, and incapable of taking in those things which are finished. It is impossible for a teacher at an institute to educate people. The speaker has only one of two things to do. He has to give them if he succeeds a confidential heart to heart talk on simple fundamentals, which will inspire in those minds that are not capable of not thinking well a desire to do well in the business in

which they are engaged, and their education must be carried on at home. Take a man who inspires a sentiment and prescribes a course of reading, brings the learner into touch with his business, and creates a love for things which he is trying to learn, then if the incentive is strong enough, all the powers on earth cannot prevent him from learning; he will educate himself. No institute teacher is capable of educating, and a large number of pedantic expressions will fall upon deaf ears.

(Time called.) I move that the order of this meeting as promulgated by your honorable office be suspended, and that each speaker hereafter be allowed two or three minutes longer. It seems we are not all here, and five minutes are very short. I wasn't quite through.

(Motion seconded, and lost.)

Mr. Drake, of Washington, D. C.: Ladies and gentlemen: When we take a good drink of cool water on a warm day, or partake of a meal of victuals when we are real hungry, we say that touches the spot. A successful institute must touch the spot. As Dr. Brown has already said, it must come down to local problems. I had the pleasure of taking part in an institute once, and every man chose his own subject. We did not know exactly the conditions. The first man that led off was a man who was a first class live stock, a beef production man, and he led off with an excellent paper on the production of beef, and it was a masterpiece. He closed his talk. For a few minutes dead silence reigned around. Then the chairman called for discussion. No discussion came. He called for more discussion, and still no discussion. Then a man arose and said, "Well, I think the young man has come to the wrong place to talk about beef production. We quit the beef production business a long time ago, and are in the dairy business." And that is an instance where we started off by not touching the spot. There are certain general subjects we can carry all over the country, subjects we can change here and there, but a man ought to know the local conditions as thoroughly as possible, and he ought to change these general subjects in so far as he can and make them fit local conditions. I have never seen a real institute that did not hit these local problems. Whatever can be done to put in the hands of the institute men, something that will assist them to understand local problems and assist him in understanding them quickly is a very profitable investment.

I picked up Director Thorne's report the other day, and I read in there a description of some work he has outlined, which I think is one of the most valuable things that can be worked out, and if it is worked out I will say it will be a monument not only to Dr. Thorne, but also to Ohio. If you will take it and read it you will find an outline of agricultural report based on a thorough study of the soils of this state. If they could be put in the hands of every institute man, what a great power that would be. I know these institute men are men who will

make it fit for local conditions every time when the best possible material is put into their hands. I can see work ahead for a man who is going to do institute work in Ohio. Ohio does not stop half way in doing anything. I will say at the present time the institute in Ohio is at this time away ahead of any other state in the Union. Ohio is demanding better material, demanding better work, and the State Board demanding better work. What can we do to still further increase the efficiency of this work which is already on a very high plane. I want to say when the time comes to push this you cannot spend your time any better than on what Dr. Thorne has outlined. Think what it would be for a man before he starts out in a certain section of a state to have before him a thoroughly digested, written up, concise statement about the agriculture of that state, along with a carefully, thoroughly prepared map by a soil expert that will show you on what kind of soil you are working, and as soon as that is done I want to say to you it will be a great deal better for the institutes of this state.

Prof. Stabler: It is certainly a very high compliment to a man who has only been in the work a few years, to be called upon to follow up the same platform after Dr. Chamberlain and Dr. Brown, two of the great masters of the art of institute work in the United States. Now, at a meeting of the institute workers at Washington a little more than a year ago, the definition of an institute, which seemed to be accepted by all, was that it is a school for grown-ups in country life. A school for grown-ups, not a school for children, not a school for the young people, but a school for the old people. Furthermore, I would add that the chief object of the institute should be to enthuse into the old people the spirit of progress which is in the young people. The great difficulty has been, as Dr. Chamberlain has said, to get the real practical farmers to feel that it is their business to be there in time, and take part in the institute, and it is the business of the institute department of the state, the man who plans the institutes, and the man who goes to the institute from headquarters to be so alive with the spirit of progress, and so full of interest in the work that any man who touches him cannot fail to receive a spark of life from him. Now, that is what I regard as the mission of the institute to enthuse the spirit of progress into the people of the country, and I do not regard an institute as a place for local and general entertainment. I regard it strictly as a school, as a place where the people who come to listen to men who understand their business, men who are recognized experts in particular lines, and who come there for a purpose, to acquire definite information which may be applied in their every day affairs at home. The information should be sufficiently definite and sufficiently clearly stated in language that no one can fail to understand, that it may be immediately applied, and, therefore, not forgotten. Information that is not applied is soon forgotten. Now the difficulty about



the scientists, the agricultural scientists who are working at the agricultural station, or teaching agricultural science at the university, is that he is accustomed to deal with truth in the abstract rather than to apply it to the making of money and to the improvement of conditions in country life. There needs to be an interpreter of these facts that the scientist discovers, there needs to be somebody who will carry them to the farmer, and that will put them in such shape that the farmer can grasp them and apply them when they are once ascertained, that they may become living things. They become object lessons to the community, whereby a thing which he teaches all his neighbors whether he does much talking or not. That is the object of the institute in our state.

Our law expressly states that the association is for the purpose of carrying information to the farmers, the central idea being that the science which has been elaborated by specialists whether they be experimenters at the Experiment Station or experimenters on their own farms, information that has been elaborated by specialists that can be carried to the farmers, that they can immediately apply it, and country conditions be improved thereby.

Mr. McIntire: Mr. Chairman, Ladies and Gentlemen: It certainly seems to me if you are to have a successful institute you must have somebody there. Institutes that are not well attended are never a success. This does not seem to be the trouble in Ohio. In other states there seems to be great trouble, and we have sent advance agents after the people to get them to come out. We must have attendance to have a successful interest. No question about that. We want to make that the very first thing. Then we want to be there, and to get the men there who need help most. As a general thing I believe the farmers' institutes are attended by men who need the help the least. Men who are leaders, men who are standards are not the men who need the help. I never go into a community but what I think of the man who is living back on the hills on a poor farm. He is not a leader in agriculture, he is not a student, he is not successful, he is having a hard time to get along. And it seems to me most of the talk of the institute workers today is directed at the man who is the standard, at the man who is away ahead. But what we want is to bring up the masses, and in order to do that we must reach the man who is not up to the standard. I believe in going ahead of the institute a couple of weeks, and talking to the men about selection, about breeding, about spraying their orchard, how to make bordeaux, what the compound solution is, and insecticides, and such things, point out methods of educating their minds, and then two weeks later, when that institute comes off that man will probably be there to hear the man that has visited his farm; and I earnestly hope the time is coming when in some sections of the country when an institute worker will go ahead, and hunt all the men that need most, and spend a day with them at

the farm; then I fully believe they will be there the day when the institute comes off. And we must not forget that fully fifty per cent. of the farmers' institutes consist of ladies, the wives and daughters, and unless there is some instruction to interest them I do not believe the institute will be complete. I am a profound believer in lady instructors; that at three-fourths of the institutes there should be ladies informed in house-keepers' art, the science of domestic economy and those things. I believe the farmers' wives and daughters are overlooked to a certain extent in farmers' institutes.

There are three points I want to make:

1st. To get the people there.

Next, to get the man there who needs help the most.

Next, an instructor for farmers' wives and daughters. Then have a man and lady, or men and lady instructors who are cultivated. The secret of the whole thing it seems to me after all depends upon the kind of instructors that are sent out, men who make the people sorry when they hear what they have said, and were not there to hear it.

Rankin, of Fayette: I am afraid you are going to lose the force of these speeches in consequence of the embarrassment of having to come before you. I am simply a layman, and not a state speaker. I would say, however, that the success of the institute depends upon the working together of all the working elements of that institute, and I would characterize three of those: The executive committee, the president and the state speakers. I know, without speaking in disparagement of the state speakers, I would consider the first two are of the greatest importance. I have said even in the presence of state speakers that if the farmer didn't get any more benefit than they get direct from the lecturer or speaker that the state sends out, it is not worth what it cost. That is not speaking disparagingly of the state speakers. They are good, but the trouble with the state speaker is in not grasping the conditions around them. They are not acquainted themselves with the people, and their method of procedure. The executive committee must be in the line to prepare a program that will reach the people. The next thing is that the president carry out the purpose of that program in the direction of teaching and not entertaining, because we frequently have said in the institute in which I have had an interest, "It is not a place of entertainment at all. It is a school, a place to be taught," and in just the proportion as the speakers should leave their subjects in a way that would make an inquiring condition of the minds in the audience, just in that degree you will get the interest, and just in that degree you will get benefit out of the meeting. It is not worth while to go to a community to present a subject that that community is not interested in.

We have had no trouble in getting out an audience if the weather has been any way suitable.

We have in our community made an effort to excite an interest which will induce the audience to ask questions, and as soon as an audience gets to asking questions the people will get great good out of it. Unless you present the subject in such a way that will excite the interest of the people to such an extent that they are willing to discuss the question, you are getting very little good out of the institute.

Again I say that the interest of the institute depends upon those three elements working together to that end.

Mr. Dunlap: In the little town where I live, Kingston, Ross County, one of the first places in the state to have an institute, and we have had all those bright and shining lights of institute speakers. At last it got kind of old, that is, it got so they would not vote to have an institute, and we did without a couple of years. Then we couldn't get state aid, and concluded to have an institute of our own. We depended on home talent. Three years ago we had a very good organization, and we had an institute, and it was one of the best. We had to depend on home speakers. A day and a half. It began at noon, and the next day, three sessions. Every session we had a full attendance, the home talent taking pride in it, which they couldn't hardly do when they had state speakers. As they supposed their state speakers were paid to run it they would not take any part. If you want to have a successful institute you must get the home talent to take part. Last year every minute of the time was taken, and it was a very good institute, and we expect to have another good one. Another thing is, most people appreciate what costs them something. We had to pay the expenses, and we tried to improve the time which we would not do if it had not.

Mr. Cobb, of Jackson: Mr. President and Fellow Citizens: The question of institutes is rather a new thing in our little city of Wellston. We know more there of digging coal, hunting gas, making cement and pig iron; yet we found we must go to the soil to get a support in these uncertain times when business is at a standstill. We organized an institute in our city, situated in three surrounding townships, and the city of Wellston seemed to be the best place to hold the institute. We found it a little difficult to get the basket dinners when we were holding two days' meetings; another trouble we found was in not being strictly in touch with the Agricultural Department of the state. Now I don't wish to find fault with the speakers. We had pretty good ones. But they came to us from the richer part of the state. They were filled up with the idea of raising 100 bushels of corn to the acre, fine wheat and hogs, where you can plow every acre of ground, and they came down where we could not successfully plow more than one-third of the land without danger of washing away. Another and a different system of argument is needed from what is needed in the central part, and especially the northwestern part of the state. At our last meeting we had

called our society together by card, about sixty-five members, to meet on the 12th of December, and just one week before that we received notice from the state department that we would have two lecturers, Farnsworth and Judy, and they picked the 12th and 13th—they got that 13th in—and it was just at the front end of the blizzard, and our membership came out, but not the mass of the people. We had had once before a pretty large meeting. It grew out of the fact that it was announced that a speaker would be there to say that agriculture should be taught in common schools. So we immediately waited on the superintendent of the high school, and he said he would give us the high school, and also the graduating class of seventy or eighty would sing for us, and furnish us literary talent. We couldn't very well do otherwise than accept; and we got them, and they about got the time. It was all well meant, and was quite interesting, and the children came out, and that brought the parents, but we had to hold the meeting so late we had to go home before the lecturer got through. It is interesting to be in touch with the state officers, and we should begin at least two months in advance of the meeting to get speakers who are adapted to the locality, and then the people will come out. We have a department of forestry in Ohio, yet I have failed to hear anything about it, and especially in a section where at least one-third of it wants to grow into brush, and can only be used for pasture, because these side hills if you plow them up will all wash out. and go to the Mississippi. Yet we cannot keep them in grass without the weeds, and these take possession of our pastures, although well adapted for sheep and cattle, but the dogs take possession of our sheep.

Mr. Piper, of Washington: I have taken part first and last in a good many hundred farmers' institutes. I do not believe any one of those was ever an absolute failure, but I would hate to tell you what per cent. was very nearly so. In my opinion there are two things absolutely necessary for a successful institute. First, the speaker must have a message to present that means dollars and cents to his hearers. If he has not the message he better not talk. Second, he has to present that in such a way that some of those hearers will make use of it. I think those two things are absolutely fundamental. In many institutes the questions talked of were not adapted to that section; and not much that the farmers could use of them.

The general difficulty of most institutes is that too many subjects are presented. It is infinitely better that four speakers talk on one subject, and drive it home, than for them to talk on four different subjects and have no effect. I remember one man that I did institute work with. He had a habit of placing every incident he ever heard of on his own farm, no matter what it was, it might relate to a patent insecticide, or anything else, it was always on his farm. Such a man is scarcely a

nature faker, but he is an agricultural faker at least. I think we have had a great deal of that at institutes, and I feel there has been too much institute work where the speaker had not a real message to bring in such a way that some of his hearers would go home and make use of it.

"In What Way Can Our Agricultural Institutions be of the Most Assistance to the Institutes of the State?"

Director C. E. Thorne: At the outset I wish to say beyond any possibility of misunderstanding that the farmers' institute was never more needed in Ohio than it is today; the field was never wider open than today. There is to be no conflict between the farmers' institute and the new school of agriculture; the latter will submit to the former, each will have its mission, each its distinct place in the field.

Now I take it, the first work of the farmers' institute speaker is to, as the last speaker has said, bring home to the audience some one particular point in its practical application to that particular locality, to the point of going farther and deeper in that work. Now as to the assistance which the state institutions of agriculture may be to the institute. The work of the Department of Agriculture itself is no familiar that I need only advert to it. It is to furnish the machinery for carrying on the institute work. The College of Agriculture—I hoped Dean Price would take up that part of the work, and dwell upon it; its work in formulating principles and adapting those principles to practical application. The Experiment Station has its distinct work in this field. The Experiment Station hopes to be able to carry out such an agricultural survey, not simply a soil survey, but a survey of the whole agricultural question in every county of the state that will put before the institute speakers the facts upon which he may base an argument applicable to the local conditions in each county. This survey means far more than a soil survey; it means taking up all the agricultural conditions all over the state. It is a survey the station must have before it can perform its work. And while this work has already been begun, it is to be hoped it will be carried further. This work is being done in the forestry survey, in the horticultural survey, and in a small way the soil survey. In all these various surveys facts will be established for every locality in the state which will be of inestimable value to the institute speaker in bringing his argument home to the people in the separate localities.

The Experiment Station is also willing to do work of another character. The Experiment Station is willing to formulate facts so far as they are known, and to furnish these facts in the shape of charts. The College of Agriculture is willing to do the same thing. These two institutions may be of considerable help to the institute speakers by formulating principles and gathering facts and putting them in shape for use.

Mr. John Beggs: Mr. Chairman, Ladies and Gentlemen: Dr. Thorne in his few remarks has told you about the work of the Experi-

ment station, and how it helps the speaker. I want to speak about the Department of Agriculture as Dean Price is here, and he could tell you more directly about the College of Agriculture. It seems one of the greatest helps the institute worker can get is not only the knowledge that comes from these departments in the bulletins and books and other information, such as printed matter, but by coming in touch with the members of these different departments as the Experiment Station; let the institute man become acquainted with them, and every member of the Board of Agriculture. For the last three years the State Board of Agriculture has deemed it wise to call a conference of the institute workers here during the fall, some time in November, to hear lectures, and to exchange ideas, and get more information upon the different subjects taught. I think that is absolutely necessary. Where one speaker makes a declaration as a positive fact, and another comes along with an entirely different conclusion, as one man said, "I don't know which way to go; one man says to go one way, and another another."

There should be absolute uniformity. I attended this conference from beginning to end, and I have never attended a conference of institute workers in the state of Ohio where I got so much genuine intelligent help as I got from that conference in those two days. I heard Dr. Thorne lecture upon soil fertility. I had heard him before. I heard Prof. Williams on corn. I heard Prof. Vivian on soils in such a way that we can comprehend it, and we did comprehend it I believe, and it gave us an intelligent understanding of these subjects, gave us a better insight into the scientific parts of it. Then we were taken out to the hog farm under guidance of Dr. Paul Fischer, State Veterinarian, and it seemed to me I never saw anything so beneficial to me as having a live stock man go out and impart that knowledge to us. Now I have heard a great deal tonight about the institute speaker. I want to tell you it is no easy task. I tell you the institute speaker that does not develop, that does not go into that business with the determination of becoming a broader minded man and a better informed man cannot stay in the business very long in Ohio. It is a steady growth, and he must get that growth by coming into contact with men who are your superiors along scientific lines of agriculture, and then learn to think after those men, to study their writings, and become acquainted with all the departments with which you are associated. I want to say the institute men are to be congratulated that they have a State Board of Agriculture and a State Experiment Station and a College of Agriculture which are so willing to contribute to their success in this difficult field of labor.

Dean Price, of the College of Agriculture: I am rather handicapped because I do not know what has been said, and what I may say may not fit in with what has been said. Your president wrote to me last month

asking me to talk five minutes on what the agricultural institutions could do for the farmers' institutes, of the state. Now it appeals to me there are two things they can do. First they can send their representatives, their speakers to the institutes, and take part in them, and help in the institutes in that way, but to my mind that is only a small part of the work that they may do, because in a state where there are over three hundred institutes held in the season, and with the work that the members of the faculties of the agricultural college and the members of the station have to do you see they cannot attend any large number of these institutes, so it seems to me the second thing they can do is more important, and that is in helping the instructors of the institutes, helping train them, and I have a suggestion I want to make to you of a way in which this may be done. I have been watching for two or three years, in fact ever since the roundup institutes have been held in Columbus before the institutes have been held. I think they have done a great deal of good, but nothing like can be accomplished by taking the work up a little more seriously and systematically, and what I have to propose is that you form yourselves into an institute school for a week, and let that be a training school for the institute speakers themselves, and make it a closed school in which no one is present except the speakers themselves, and such men as they want to call in. Now I was interested in going through the Bulletin, and looking over the subjects that are listed under the institute speakers, and I think there are something over 300 subjects listed in the Bulletins, but if you take these subjects and study them I think you will find they will fall under twenty-four main subjects. I am taking the total. I believe if you would classify these you would find they would fall under the head of twenty or twenty-five different subjects. I just briefly chalked down some of them as they occurred to me, just glanced over some of the subjects: "Soil Fertility," "Rotation of Crops," "Commercial Fertilizers," "Farm Manure," "Use of Lime," "Drainage," "Corn Culture," "Farm Life," "Horse and Cattle Feeding," "Sheep," "Forestry," "Farm Organizations," etc. I think some such classification would embrace part or all of the subjects treated in farmers' institutes. My suggestion would be to organize yourselves into a school, beginning on Monday morning or Tuesday morning at 8 o'clock, and have the institute speakers required to be there, and have every speaker that is on the force required to give at least one of the lectures before the other men on the force, and such other men as you want to be called in, and let that be the training school, so that you get your ideas crystallized and united before you go out into the institute work, and then take two hours if you please for a discussion and conference on the subjects and questions that arise. The criticism I have to make on the roundup institutes, you have asked some one to come in and talk to you instead of doing the talking yourselves. You

have had open meetings, have had a good time and gone home. I would say, resolve yourselves into a school, and take it up seriously, and don't go home until each man has made at least one general talk, then you can call in such men as you want. When it comes to a question of soil fertility have Prof. Vivian and Prof. Thorne, and have them as authority if you have any debate. Work at it from 8 to 12 and 2 to 5, until you have covered all the subjects. In that way you can do a great deal to improve the institutes and improve yourselves. In that you should do just as in the theological seminary, the young minister delivers his sermons before his colleagues.

Then as to the college. We will be very glad to furnish you a place to hold your meetings, and will be very glad to give you the assistance of any of our men that you may want to help you to do the work.

W. G. Farnsworth: We have Dean Price here, and he has shown a willingness of the Agricultural College to assist us in every way possible. We also have Dr. Thorne here with us, and we all know the wonderful help the Agricultural College and the Experiment Station, as well as the Agricultural Board are to the institute work. They are doing everything in their power to furnish us the knowledge, the inside facts, to furnish to the people throughout the state, and we know this, they are continually digging up new facts and solving new problems that are coming before the people of the state. It is a fact that they are gathering more information than we have the ability to disseminate. The question that should come to us as institute workers and state institute lecturers is how to best get before the farmers the things. We have heard the old saying, "Don't believe anything you hear, and only about half of what you see," and that seems to be the condition of the people about the state, and we know we can teach better by appealing to the eye than to the ear; and I have thought they could assist in furnishing, not only furnishing charts, but along with the charts if they can furnish us some photographs of actual work, take for instance the actual results of the use of manure, and they show remarkable results classed side by side, good, large photographs, that would be easily observed when hanging on the wall, and also the difference where they have limed their clover, and where they have not. If we could get that before the farmers of Ohio we could get them to realize the benefit the station is to us, and if we could get them to see this we could get them to go down there, and when we got them to study their own conditions and the propositions they are confronting every day in their lives, we are going to get some good out of every institute.

Talking along the line of pruning the fruit. Men find it a very difficult matter to present that subject so that it can be understood by the farmers throughout the state. If we had photographs to show the various stages, the tree before pruning, then immediately after pruning.



then after the leaves had fallen, then another photograph of spraying after the trees are pruned, we can get it before them in an intelligent way so they can grasp the idea with the eye. I believe we could form a lasting impression and be much more effective than simply telling about it.

And along the line of beautifying country homes. The farmers are not asking as much as they should. Can we show them by photographs a home set out in a barren field, and then another home surrounded by a lawn. Many of them do not know just how to plan the grounds. If we can show them by the eye I believe we can appeal to them, and they will take hold and do something for themselves. Take live stock, take a photograph of the ideal type of the best dairy animal, let the speaker point out the superior points of this animal, the good points. Then we find a good many calls from the farmers, especially young farmers, for reading matter. Here is the place where the departments of the state can help out.

Mr. Strode: Last man down. There is not a thing left to say; it is not worth while to come up. The Agricultural Institute I suppose means the Agricultural Department, the Experiment Station, and the College. The Agricultural Department can help the institutes of the state by sending them better speakers. That is one way they can help, and if they can't find any better now we ought to turn it over to the college, and allow them to develop some that are better. We have been waiting a long time to get something out of that college, and, by the way, when they graduate they go off out of the state, and hardly ever go back to the farm. Whenever one is sent back there he has taken the long course, or the short course, or the winter course, or the two years' course, and he helps the institute because he is there to help take part in an intelligent discussion. I don't believe anything I said will have any effect, because last winter I said the institute was not a school, and everybody here says it is a school. But Dr. Stabler comes from Maryland, and he is excusable, because the institutes over there are under the direction of the Agricultural College. The reason we have better institutes than other states is due to the fact of the harmony existing between these three departments working for the uplift of agriculture in this state. We want to continue that harmony. I was glad to hear Dr. Thorne outline the different features of effort in these different institutions, and we want to keep them distinct. If we call them schools, what is the difference between our institutes and institute colleges? I don't like the idea of going out and teaching school any longer. I think the word conference, or to get them together in exchange of views, to learn from each other rather than pose as teachers, inspiration instead of information. If it is a school it is a school where all are teachers, and all are pupils, and the agricultural department ought to send men there that

can help them. Such men that have made a success of their calling, and send, in the future, men who have taken the agricultural course, are grounded in the principles there, and go back home, and in practical demonstration prove to their neighbors there is something in it; that they have to keep in line with the progress that has been made by our Experiment Station, solving out problems perhaps unthought of today. We don't want to compete one with another. We want it clearly defined, the Agricultural College teaches the science, and science, as Dr. Beggs said, is knowledge classified. Practical farmers have found it out, no matter where he has found it out; aiming to put that young man to do just where the most successful farmer ends; that is the work of the college and Experiment Station. Give that college more to teach, and the ideal institute worker in the future will be a college graduate that has made a success of it, but in the meantime we have got to depend on what we get, not as schools, but as places where we can learn from each other's successes and experiences.

Mr. Lewis, of Clinton: Is it fair for the institute instructors to spend all their time talking about the elements of agriculture when the men who are attending institutes and arrange for the institutes, and do all the work are men who have long since passed that point; and is it fair for them to spend their hour on the kindergarten work, and let the advanced work go just because there are men living back in the woods that don't know?

Mr. Murphy, of Delaware: I would like to ask Dr. Chamberlain since he suggests the question in my mind, which is being demanded more, to know why or how, in the institutes of Ohio?

Dr. Chamberlain: I would say both of them. There used to be a question in debating societies, "Which is the most necessary in building a house, the saw or hammer?" You have got to have both of them.

Mr. Stabler, of Maryland: Mr. Strode referred to the institutes of our state as being schools, and the institutes of Ohio not being. There may be some difference in opinion as to what a school is, but while the institutes are now nominally under the agricultural college, that same board has also charge of the Experiment Station. We have one board of agriculture that has charge of all our allied associations, and we have a uniform system, as there should be in all states to avoid this competition. We have no want of harmony between the institutes. They are all under one board, and the type of work which we are enabled to do in Maryland is largely due to the fact that we have there grangers' and farmers' clubs and organizations. We have taught the elements to the farmers, and when a man goes to a community of that kind, where they already know the elements, unless he is an expert he is not welcome among those people. They want experts and the best experts.

Mr. Chamberlain: I don't believe I answered the gentleman from

Delaware quite fairly. I really believe the farmers understand how already, and if anybody can give to them the underlying scientific principle in a way that they shall comprehend it, and see how to apply it, he is doing more good than a man who simply tells how to do it.

Mr. Rice, of Trumbull: Just a word in regard to adapting the subject to the locality. We had a farmers' institute in our town, and had two speakers, one was a sheep man, and the other a small fruit man, and they missed the mark. We are in the dairying business. I don't believe there was a flock of sheep in the town at the time. We were not in the fruit business. We had the agricultural extension school. We asked them to turn all their guns on the dairy farming, the soil fertility and feeding of the dairy cows. The enthusiasm of our people raised until we got to a white heat, and we had 75 members and 75 ladies, I am glad to say.

Dr. Brown: The gentleman asked why was it profitable for institute speakers to dwell on elementaries rather than go deeper into the science of agriculture? Now I take it that the institute teacher to deal entirely with elementary matters. The institute speaker receives his education from the Experiment Station, from the agricultural press, and from the books written by men who have taken up the subject and exhausted it, such as the first principles of agriculture, such as all of the other subjects which are carried out by one who has the ability.

Institute speakers get their education that way. They could not educate themselves that way if they did not first have the fundamental education. Having acquired the inspiration of learning they then go on and educate themselves. It is impossible for a speaker to take up a scientific subject, and carry it to its ultimate results in two days, and have it understood. If the speaker imparts fundamental principles so that they are inspired to learn, then they can have all this material. All this material is available to those persons in whom the institute speaker has inspired a desire to learn. Suppose he undertakes to complete the education of his hearers. Then his hearers take that as sufficient. If he only starts them in elementary matters then they themselves are prepared to learn. I think, therefore, that institute speakers should confine themselves exclusively to those things which should start a man on the road to learn.

Mr. L. P. Pierce, of Summit: A good many years ago I went in the institute business, but I was one of the pioneer workers along this line. I have been with Farmer Chamberlain on a good many cold rides. and stopped at a good many poor hotels. In going back to that time I remember that Brother Chamberlain was in the business four or five years at the start, and had a large amount of work, but he always got a new lecture, and had new ideas and impressions. So far as I see, the institute lecturers, they don't learn enough from year to year. I have

heard them in my own county, and then have accidentally been other places a good ways from home, and I notice their topics are alike year after year. But there is one thing I think they are not to blame for, and I think whoever runs the business is to blame for it, and that is a man is required to cover so many subjects. I have seen the lists of the topics required. They run from five or six to nineteen, and there is nobody in Ohio that knows nineteen different things.

Mr. Blackford: I believe we farmers' institute men have been throwing posies at ourselves long enough. We sometimes think that the people where we go will look with longing eyes and wonder if they will ever possess as much knowledge as we possess. I believe in many instances that trouble with the farmers' institute lecturer of Ohio is that he has an exaggerated ego; he is impressed with the importance of his subject; he is too much impressed with himself as the expounder of that wisdom. I believe we ought to get down off of our perch, and we ought to talk with those people on the subjects we know best. It is educational and inspirational. Let us go to the derivation. We know education means to draw out, and inspiration means to fill in. If we draw a man out, and then fill him in we are going to get a good sized man. There are quite a number of farmers' institute people here this evening, but there are a great number more of the officers and members of the local organizations, and they are the principal elements in every farmers' institute meeting. They expect to get up a good farmers' institute in ten days. The president calls a meeting, and he thinks about what they know, and he thinks of what they mean to do, and very little care has been taken in the selection of the program, and the whole thing comes up to the day of the meeting without any preparation on the part of the members of that institute, and when the speaker speaks they have not thought anything about it, and are not capable of asking questions intelligently, not so much so as if they had prepared themselves upon the subject. So I think the success of the institute depends upon the co-operation of the instructor with those who are at home who are looking after this matter. So I believe next year the institutes ought to be given a start at least two months earlier than they were started this year, and there ought to be given an opportunity for each local organization to study out a program that will meet the conditions roundabout and select some one capable of leading the discussion. Let some man introduce it, and then the institute man talk about it afterwards. I think something of this kind will be of great advantage to the institutes all over the state. We farmers' institute men who are going to stay in the business want to realize that the procession is following right on. We are not going to be in the institute business very long unless we keep up at the head.

A Member: I believe it is the state ruling that the institute speakers

can take charge of the meeting and run it to suit themselves. I just thought of that. I learned that of Allen O. Meyers. Last fall over in Columbiana county we made arrangements for an institute, and a state speaker came within ten miles of us, and switched off and held an institute in Salem, and I am here now to see if we cannot get state speakers to hold an institute again.

The President: Our instructions came that you could not get ready over at Lisbon, and they switched us off, the department, and told us to report at Salem.

A Member: Should he not have asserted his authority and gone down there anyway?

The President: We had our authority, and we were following out the instructions.

Mr. Rankin: I might say there might be some caution exercised in that idea of elementary and fundamental teaching. I hardly know how to draw the distinction. Now the greatest criticism I ever heard coming from the ordinary farmer of the state speaker is he presents the subjects theoretically without the practical, and I think the difference ought to be clearly drawn there. If there is anything that will cause an audience of farmers to lose confidence in a speaker that comes to them from state authority, it is when they get the idea that the speaker is presenting the fact from a purely theoretical standpoint. There must be some practical experience go with the theory before the ordinary farmer will take the interest he ought to.

The President: As to whether the institute force is doing what they say. There is one thing, the state board ought not to put a man on unless they have investigated him thoroughly. I have been to a number of these speakers' farms, and I want to say they are thoroughly practical.

Mr. Rankin: I want to say of my own knowledge, I think that is true. I think they are practical men. I only spoke of the effect on the ordinary farmer.

Mr. Johnson, of Williams: I dislike to speak before this intelligent audience, because if I am guilty of one thing more than another at a farmers' institute, it is giving my practical experience. It is all right to talk about scientific farming. I believe in it, ladies and gentlemen. I believe if I am talking on tile drainage I may say it is one of the best ways to make available the fertility of the farm, but if I talk a little bit along that line the mass of the farmers of Ohio want to know how best to tile a field, and the charges I have against the farmers' institute in my own county, where it is not carried on like in some places, we have no local talent because of jealousies, and some of the best farmers won't attend the institutes now because they don't get the practical application. So I have been guilty of presenting the subject to institutes

by giving a practical demonstration, and fall short in making it scientific, because I am not a scientific man. But when I read a work on soil fertility or tile drainage I know when it will not work in our locality. Whatever science there is that he has won't apply not half so quickly as my practical experience. I am so glad, ladies and gentlemen, to be a farmer: you have got to know how to apply these scientific principles. The lack of the farmer that we don't reach is to know how best to put his scientific theories into practice. If we don't raise double the amount of corn we do in Ohio it is because we don't do our work right. I don't say that is absolutely true, but it is one of the real reasons.

The failure of farmers' institutes, as has been well said, is because we do not get them out. That is one fault. It will be ideal then if you can get them out early, and get the men there that are needed there, and get the state speaker in touch with his audience, in sympathy with his audience. Whether you put to the front the theory most or the practical part, get them to want knowledge, and then you will have a success.

Mr. Field, of Clinton: I remember Dr. Chamberlain in the institute of 1882, telling us some things, and I have been helped, and I have learned some things in spite of the other state speakers. I do not think there is but one gentleman this evening who touched the point of the question of what is a successful institute, and that is Mr. Piper. We try to take a whole agricultural course in two days. You know what our usual program is. We begin by opening with prayer, address of welcome by the mayor, a response, then we have a little declamation, and then the state speaker talks twenty minutes on soil fertility, a question that takes Prof. Vivian a whole year; then the burning question of the hour is good roads; then after we build good roads for fifteen or twenty minutes some one wants to know about alfalfa. Then we have tried to cover three subjects. I believe the old cow is good enough for the whole session—the old cow and her products. We ought to give her the whole session, and not divide it up into half a dozen subjects. I think we ought to advertise the farm institutes to get the people out. We ought to observe the methods of Secretary Clark in advertising the state Sunday school. We ought to advertise it so that every one will know of it, and when and where it will be.

Mrs. Brubaker: I just would like to ask the gentlemen if they expect to get the ladies out to the institutes by always leaving them off the program? I do not believe that women are ever going to be treated equal with the men until they have the right to vote, do you? I just want to say the most successful institutes in Henry county have been those on which the ladies assisted on the program.

Mr. Prue, of Preble: The state speakers have been talking about their side of the question, and finding fault with the executive members, but when it comes to having an institute year after year in your own

locality and depending on your own talent it doesn't take very long to exhaust local talent, and then when it comes to threshing this over again and again it creates a kind of a feeling that you won't learn anything if you do hear them. It is a hard matter to get the men to come out and listen again and again to the same speakers, and on the other hand it is often very hard to get new people to come in. We have been having speakers, Dr. Chamberlain and others, and for more or less a dozen years I have been on the executive committee. We ought to start these institutes six months ahead, but we don't know six months ahead what the state speakers' subjects will be. But I believe if we could advertise these speakers and the subjects a long way ahead we would have a big institute.

Mr. Buchanan, of Carroll: I certainly have appreciated many of the good things that have been said at this institute. In speaking of handling but one subject at an institute, I believe that is practical and right. Let our committee who looks after the program look after that. However, there may be institutes where that would be very difficult. I want to say just one word as to the qualifications of the institute man. I am like some of the men who think that the institute man that knows no more than his own experience does not know very much.

Mr. Beggs: I want to speak a word about the ladies' session, and their part in the institute. There is a great deal of complaint sometimes because they are not recognized. I want to say it is the ladies' own fault in not demanding notice. In my own county there was a new departure, and I want to tell you what it was. The people here can take it up. It was a good move. The ladies in one of the institutes in Allen county conceived the idea of holding a second session in one of the buildings, officered by ladies, and the subjects before the sessions were discussed by the ladies, and men excluded. During that time the gentlemen held their regular session of the institute in the city hall. The next morning on reconvening I was talking to a gentleman there when his wife came up. I said, "How did you get along?" She said, "That was the best session of the institute I ever attended. We could discuss household topics which we could not discuss in mixed audiences," and the same thing proved true of the men.

Now in regard to the criticism about the speaker. The speaker is not perfection. When he is high enough to be a professor he is not going to accept a three weeks' course in teaching an institute. Then about the number of subjects. I want to tell you the man who is not going to talk about but one subject is not going to get into the different communities two or three times and fill the bill as speaker; and then he has got to have two qualifications. He ought to have been a success at home, because today a man's reputation is known before he gets there, and he must have the confidence of that community in his own ability.

and I would not go across this hall to hear a man tell how to do a thing that had failed himself. When men make application to get on the force and fail, then they turn around and criticise the other fellow who does get on. That is pretty plain, but it is the facts of the case. Whenever a man goes out before the people of Ohio equipped as he should be with the practical knowledge—for instance let me refer to Dr. Chamberlain, then you won't accuse me of that ego Mr. Blackford spoke of—he has been talking tile drainage intelligently because he has been in the ditch, and knows how to throw the dirt in, and the man that cannot do that cannot talk intelligently.

I remember over at Sidney—I am not afraid to tell the place—an old gentleman got up in the audience, after I had talked about raising young cattle on the farm, a subject I like to talk about, and after I sat down he got up, and said, "I would like to ask Mr. Beggs how heavy his cattle are?" I got up and thanked him before I answered it, and told him every institute man ought to be asked that question. One of the best horticulturalists I ever heard talk over the question took up any part of the subject, and told how he had done it himself. He has handled everything from the pruning shears to the spraying pump. I want to say that is the kind of lecturer you want, and you can't get that kind of a man for two weeks' tenure of work.

Adjournment.

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## THURSDAY EVENING.

### ROUND TABLE.

Meeting called to order by the President.

Selection from James Whitcomb Riley read by Mr. Willman.

Music.

The President: It seems to me there are a great many problems facing the institutes of Ohio, and we want to make them as strong as possible, and in order to do so we want to get the ideas from every one, and we will try to get them out of both sides—the lecture course, and the other side as well. We will ask Mr. George Scott to tell us something about what he considers the most vital problem facing the institutes of Ohio.

Mr. Scott: Mr. President, ladies and gentlemen, sometimes the more experience we have, the less confidence we seem to have in ourselves, and probably in the work we are engaged in. Now, I remember nearly seventeen years ago I had half a dozen addresses written out and I read them from the platform. I considered them, as every young man would, of considerable value, and S. H. Todd, who was with me, thought I was shooting over the head of the audience, and I soon found out they were a little beyond the ordinary audience. He



said, "You better throw these things away, and go straight from the teeth—you will do better." And I did do better—and he tells quite a little story. One day, at the first institute, I said, "Now, if I don't get along all right you must help me out, for I am sure that I can't stand more than fifteen minutes." He tells the story that after I had gotten through it was an hour and fifteen minutes. Of course, I was naturally scared to death, but it was so, and it came entirely from a practical standpoint. I had worked it out.

Now, tonight I am here to say to you, good friends, after these years of experience, that for the future institutes the great problems are the picking up or the electing of the men who are to go before the audiences in these people's institutes and hold the people together and get them interested, and the direction of these men should be in the hands of other men who have sufficient intelligence to be able to select those men who can go out to the farmers' institutes with intelligent and practical help. I don't want to cast any reflection upon the State Board of Agriculture, but I am satisfied there has been a little too much carelessness along that line. I don't know that I am here to suggest that there should be any special bond, but there should be at least some inspection, that they have enough good moral courage, intelligent courage, to be able to talk to the people of those things they need most.

I find one thing in attending the farmers' institutes generally—that what you want to talk to them is what they themselves are interested in. I have heard of a man going on the platform and talking to the people about things that are entirely foreign to the interests of the people, and of course they become restless. We want to talk to them about things in which they are deeply and intensely interested, and in no other way can we reach them. As a gentleman said here last night in a few words, "If you are going to measure a man's work up from that which he has observed only on his own farm, he has not much to show." That means simply this, that a man does not measure up with other people that does not go out and compare himself with other people, never becomes a bright man. The fact that a man puts on a boiled shirt occasionally, goes to the stock man in the neighboring county, and measures himself up and what he has at home with those things he sees away from home, and he becomes a brighter man, and unless we can make students of ourselves—I don't care if we are but farmers, there is no reason why we should not be students. If we have not been to college, there is no reason why we should be stupid.

Mr. Cunningham: I cannot speak from experience. I never addressed more than a half-dozen farmers' institutes in my life; therefore I can speak strictly as an outsider. When Mr. Wagner asked me if I could speak a few words on this subject, I got to turning this matter over in my mind. I think it is a pretty big question to decide, "What is the most vital problem facing the institutes of Ohio?" I talked to some men

about it, and got as many answers as men that I addressed, but I think, at least in my mind, the most vital problem is the matter of specialization. This is an age of specialists. The time of generalities has gone by in everything. The man who is successful in any line to-day is the man who specializes, who aims at one mark and does his best to hit it; therefore, I think in the choice of our institute workers we must have selected men who have paid special attention in certain lines—men who are specialists, not necessarily in one line, but in a certain group of work, I should say in a certain group of lines that are adapted to their own locality. I don't believe that any of us will doubt the statement at all that farmers' institute workers of Ohio will measure up to those of any other state—our men who talk from experience or direct observation. They speak from recent experience and direct observation, and I think that our plan is better than the plan of men who merely instruct in principles. The institute should be a place where men meet not only to instruct others, but where they relate to each other the experiences they have had.

Now, in the matter of specialists. I think Mr. Scott made a very good point when he said men ought to be in sympathy with their audiences; that is, a man should address his audience who is interested along the lines in which this specialist has had experience. The other day we were told and shown that the corn belt of Ohio, according to the results of our corn shows, was limited to a territory comprising about 25 counties; therefore, is it not natural to suppose that a man who is to address an institute in that territory should be well versed in the interests of the people of that territory? In other words, would it not be advisable to have a farmer who has been born and raised in a corn belt to address farmers who are working under conditions similar to the men of the corn belt? Would it not be advisable to have a dairyman who knows all about practical dairying, well versed in dairying, to address those interested in dairying; would it not be desirable that men who are interested in horticulture should address the horticulturists; and that a man who knows the ins and outs of market gardening, should address the gardeners, etc.?

I think, therefore, gentlemen, that the most vital problem facing our institutions today is to get our specialists in direct sympathy with their audiences and have our specialists particularly trained in the work in which the audience itself is interested.

With that one point, I think I will close in order that I may not exceed my time. That one point is to my mind the most vital problem, to get the proper speaker before the proper audience.

Mr. Chairman: We are very fortunate this evening in having a lady with us to-night. Down in Henry County they have a very good institute, they attend well and never play out; and Mrs. Brubaker will take this matter up.

Mrs. Brubaker: I am glad to be a representative, a very humble one, of the women of Ohio here to-night, and I want to say to you that I honestly believe that there are hundreds of bright, intelligent country women in Ohio who ought to be classed *per se*, throw themselves on the farmer's state institute program. Will any of you be offended if I mention to you here the remarks that were made yesterday in recognizing the need of women in the farmers' institute work? There was just this much said. Some one said there ought to be a cooking school, and I was also reminded last evening that it was woman's own fault, it was her indifference the reason she was not recognized more in this work, but I want to say to you as representative men of the agricultural interests of Ohio that you, yourselves, have not recognized the need of the help of the women in the institute work. A man may be able to live in town and board and conduct a business, but rarely can a man live in the country and conduct a farm without a woman. Now, if you can't conduct a farm itself without the woman, how do you expect to make the best and highest success of the mental and educational and ethical side of the question separate from them? In England the women of the upper classes are trained from childhood to feel and to know their obligation and need to society and to their country as citizens. Does any one expect that the women of America, that our beloved country women of Ohio will achieve its broader spirit in a cooking school? There is only one way to give them this broader vision, make her an equal part and partner in the educational work and she will come to realize her obligations and when she does this she will neither shirk nor prove false to her trust. The question of morals and the question of social need are just as practical as the question of dollars and cents, and one must keep pace with the other, and no one can deny that on this question the women are always alert. So I would say to you, just give the women a chance and then help them to fill that chance.

The Chairman: I thought I had made a mistake by not giving one session to the women in our own home institute this year. I own up we made a mistake, and I think we made a mistake this year by not having a ladies' session.

Mr. Scott, of West Virginia: Mr Chairman, ladies and gentlemen, if this question read, "What is the Greatest Problem of Institute Work in West Virginia?" I would like it much better, as I have had more experience there. The question is near to me because we have so many problems in this institute work, and to my mind one of the problems in which the people fail is to realize the importance of the adaptability of their soils to their crops. Too many times we go into a community where they are attempting to grow something that their soil is not adapted to. We go into a community and we find them plowing the hillside and planting corn where it should be fruit or grass; we find them trying to grow potatoes on lands that are not underdrained. They come

to the institute and ask the questions, "Why can't we succeed with our potatoes; why can't we succeed with our fruit?"

To my mind the greatest question is the lack of appreciation of the adaptability of our soil and selecting our crops according to the market demands.

Mr. Thunderburg: Mr. Chairman, ladies and gentlemen: About 20 years ago, 18 or 20 years ago, when we were boys in the district school we knew practically nothing about our own physical bodies, and about 20 years ago they introduced physiology in our local schools, and we boys began to find out something of our makeup, something of the conditions of the bad effects of bad living in our system, and it was taught us about that time, the bad effect of alcohol on the system; and at that time if a man wanted to open a saloon, he did it almost any place in the country he wished to, and it was not long until people began to feel that the effects of liquor was not a thing for our systems and they began to drive them out of our townships, and finally to drive them out of the villages, and the boys being educated farther along this line and the girls as well, and finally we became heads of homes and the daughters became the wives of these men, and they began driving the saloons out of the small villages, and then out of the counties, and we are glad to say today that a large majority of the counties in this state are dry counties, and why? One of the reasons is the people are educated to know the bad effects of the saloons morally as well as physically.

When we educate our people along the lines of agriculture they then begin to inquire why. When they become interested in the agricultural work they will want to know something more about agriculture. Then we will need practical institute speakers—speakers, as some one here said, practical men who will go out before these audiences that they might give practical subjects, that they might discuss practical subjects. One of the things we have had in our own institute this year and last year—in Clark County, one of the largest dry counties in the state, and we live practically in a dairy neighborhood, we have not had a speaker that was a practical dairyman, and we felt that we were handicapped in our institute along that line. But fortunately we had local talent ready to help us out with our institute, or rather help make our institute what it has been, and I am sure we need practical men and practical subjects in addition, that they may go before intelligent, practical people with the reasons, not what somebody else had told them nor what they learned in some agricultural school, but what they have done themselves under the same conditions and the same surroundings as we ourselves.

Hon. T. C. Laylin: Mr. President, I am glad to meet with you once more, but if you think I can get through in five minutes you are mistaken, because I can't tell all I want to in that time. I appreciate the ovation, because I know it was not given to me as an individual,

but because I represent the Ohio State Grange, which is worthy of all the commendation you can give it for the work it has done along all lines for the Ohio farmers.

This question tonight is too much like concentrated food—it's not good for the system. To tell about it in five minutes is an impossibility. I must commence, or I will never get through. In the first place it is the institute lecturer that will claim our attention—the man behind the institute. If we could have a man we ought to have (and we can't have him in this world), we would have a man that had the education, intelligence, a man that has the wisdom, judgment, and then you would have a man with the ability. Now, you don't know what I mean by that exactly. I mean the man that has something to tell. Many speakers do not know; or, if they do know, it is not present in their minds at the time they are telling it. If you want to have a man of judgment—wisdom, I call it—who can size up his speech, and tell what he knows they need out of his vast storehouse of knowledge; and lastly, you want a man of ability that can present that knowledge in such a way that he will claim the attention of everyone in the audience, whether it is a man, woman, boy or girl. Now, there are very few men who can do that, but if they would study these three points, then you would have solved, if you could get these men, one point in this discussion. But they are worth more than five dollars a day.

The second question is this, "What does the institute need?" What do the farmers of Ohio need? What is the great problem that confronts us today? You hear it upon every street corner; you hear it in your newspapers; you hear it upon the platform. It is that which has been prophesied by some of us ever since 1894, and that is, that production—that consumption has almost reached production.

Now, the farmer needs to think how he can raise more upon the same acre. You may look over the state of Ohio as you are riding upon the trains, and you will see, if you are thinking about it, that there is not an acre of land in Ohio that you can see from those windows but what can be made to produce profitably twice as much as it is producing today. That has been demonstrated right here. Our cities have been growing not at the expense of the country everywhere, but in spite of the country, and our population in the country has been the same. It means to us a great responsibility—it means that we have to feed the American farmers in the world, the American people in the cities in the future. Are we able to do it? How can we do it? It means prosperity and money to the American farmer. It means that every acre of available land that you have in the state of Ohio, that when brought to its proper state of production will not be worth fifty dollars an acre, but will be worth three hundred dollars an acre, and then all the way up. How are we going to do it? Only by education of the American farmer, and it does not do much good for us to try to educate the old man. An old dog

seldom learns new tricks. It is the American institute and the American institute lecturer that gathers the boys and girls into the meetings, and then he has a chance to arouse the interest in that boy's mind for a better education, and if a lecture like Dr. Thorne's could be presented in such a manner that it would claim that boy's attention, and he would know what he has to do and must do in order to fulfill his destiny as a farmer, as a man and as a citizen, then we would know that the American farmer would continue to raise enough to feed the American people. I thank you.

Mr. Cook: To speak on the question of the most vital problem confronting a farmers' institute is very much like a man going out with a seed-corn testing box under his arm and proclaiming that the test of the seed corn is the only necessary thing in order to produce a good crop of corn. However, picking out one of the most neglected features of the farmers' institute, it seems to me that the business side of the farmer is one of the neglected features and factors that perhaps could with profit be considered with advantage to the farmer. This business side of the farmer is perhaps what makes the difference between a successful farmer and those farmers who fail—perhaps makes more difference than any other particular feature. I have in mind a number of men who have taken up the same farms and been successful where other men have failed; they have been able to succeed by different methods. I remember one particular man. I can remember when he was a poor man, but he has succeeded by his business methods. Perhaps a few of us, by intuition, can succeed where the most of us have to learn the same thing. It is not safe to conclude that we can do the same thing because a few of us have been successful.

This question of presenting exact figures of what has been done upon an individual farm is something every farmer is glad to hear. It has been so seldom presented that it is something of a novelty, and it is practical as well. Perhaps the dairyman comes the nearest illustrating this point. The dairyman has succeeded in presenting more figures along this line than any other branch of agriculture. The general farmer relies entirely upon his bank account to see whether he has had a successful year or not. The dairyman has gone farther on the way than the other lines and he should be an incentive to the other farmers. I venture the assertion the average farmer in the state of Ohio is carrying on certain enterprises to disadvantage in the same manner as illustrated by Prof. Erf in speaking of the man who had seventeen cows, only three of which were profitable. That dairyman would have had more money at the end of the year if he had picked out a few of the most profitable cows. I am sure that it is true that the same conditions exist among farmers in regard to certain crops. They are simply carrying certain crops along by the more profitable ones. If we could learn to cut the unprofitable ones out we would have more money with less work.

It seems to me that one problem is to present these facts to the farmers in a way that would help them see which are the profitable and unprofitable crops.

Mr. King: The valuable suggestions to which we have listened from men long familiar with institute work seemed to cover the ground very well, and I would not be presumptuous enough to attempt to add anything thereto, were it not a discourtesy to your President who has asked me to give some suggestions from the viewpoint of an outsider, and this without a moment's notice for preparation.

In reference to the scope of subjects dealt with in institute work, I have long thought that some popular lectures on economics might be well worth while and prove a most interesting factor. It is indeed highly valuable for the farmers to learn how to raise better stock and to double their crop yield, but it strikes me as equally valuable a thing for them to know how to secure the full value of what they produce. We learn from competent authority that only 35 cents of the consumer's dollar is returned to the producing farmer. The stock exchange men, speculators, transportation magnates, gentlemen in Wall Street who clip bonds for a living, are perfectly satisfied with this division so long as they can take the 65 cents. In short they are highly gratified for the farmers to milk the cow so long as they can skim the cream. Scientific agriculture becomes a more valuable thing for them than for the farmer himself.

It may be a little aside from the purpose of this discussion to suggest this, but not much, because the farmer is becoming interested in this fact and is demanding to know the real whyfore of this injustice, and it seems to me some lectures on the Structure of Society and the Inter-Relation of its Various Factories and Functions, in short some fundamental facts, common-sense, political economy, could be taught to the greatest advantage in such a manner as not even to challenge the serious opposition of the politicians. I think such discussions along proper lines would add greatly to the enthusiasm and real worth of farmers' institutes.

I agree heartily with the suggestion of Mr. Cook in regard to the value of more business-like methods being taught, and I was delighted with the able and apt address of Mrs. Brubaker concerning the necessity of instruction for women at these institutes.

Referring to the actual conduct of the institute, I many times have experienced distinct disappointment at the tendency in some institute speakers to be "good fellows," and amuse their audiences with witty stories at the expense of substantial instruction. It is not wholly their fault, as I have also noted many institutes which seem to desire entertainment rather than instruction. Again I have been impressed with the pitiable weakness of certain speakers who were fine men and knew their

subject thoroughly, but were not possessed with that vital art of knowing how to tell what they knew. Hence not more than 25% of their hearers really gained anything from their address.

When a student and taking lectures from Dr. B. A. Hinsdale (who, by the way, is an Ohio man as you well know) at the University of Michigan on the Science and Art of Teaching, I learned the vital necessity of connecting the new with the old,—that is, of utilizing the stock of knowledge the student already has to illustrate the new idea the teacher has to convey. The most efficient institute speakers I have ever listened to were those who began with the common every-day facts known to their hearers and led up from them to the higher truths of their message. They illuminated common knowledge by scientific explanation. There is always a danger for the speaker to assume too much knowledge on the part of his audience, on the particular subject he is discussing, and to use too many intricate phrases in an offhand manner. The men who can present a subject clearly are rather hard to find, and so it seems to me that a rather more extended system of charts, diagrams, pictures and other methods of instruction that appeal to the eye as well as to the mind, would greatly assist the average lecturer in carrying his message direct home.

The Chairman: The next subject is, "What is the Best Method to Bring Out Local Help at Our Institutes?" I will call on Mr. Judy to open this. (Applause.)

Mr. Judy: Mr. President, ladies and gentlemen, the first thing I am going to take up is the state speaker. He should make his talks plain, concise and right to the point—not shoot over the heads of the people—as suggested here today, and in such a manner that the audience is carried with it. To illustrate, the other day a state speaker was making a talk, and an old gentleman got right up and began to tell a story. The state speaker had the courtesy to stop and let him go on. Get your audience so interested that they can't wait until you get through. You carry your audience right with you so intensely that they want to talk while you are talking. Now, that's the faculty the state speaker wants to cultivate. Another instance: A little boy who wasn't over ten years old commenced asking questions while the state speaker was talking. That's a fact. That wants to be a commendation, a thing that draws out a suggestion; a talk that arouses thought in the minds of the speaker. And then, just as soon as the speaker is through he wants to stop, because those people out there are ready to get up, and they will begin to fire questions at him, and he wants to answer them quickly. Don't linger on a question. Answer them quickly. Just let them keep you bobbing up and down. Sometimes you can get them to take up the subject and discuss it among themselves.

Now, then, the program committee wants to arrange their program not too full to put on local talent, and insist upon that local talent, and



become familiar in a brotherly way with that local talent. Get them into the audience, and have them respond promptly. It depends more on the local than that of the state speaker. These subjects want to be such subjects as are uppermost in the minds of the people of the locality. Another thing, have the president—and much more depends upon the local help of the president, I think, than any other one thing—begin promptly on time if there are only two people in their seats, rap the speaker down and rap the speaker up right on time—do it in a courteous, genial, warm-hearted way, and make everybody in the audience feel at home. Now, then, when you see you have this interest started, then it depends upon us speakers to cut our talks short, and leave much more unsaid than what we intend to say, and bring it out in the discussion. That is all of my subject.

Mr. Blackford: The subject is, the best way to arouse local interest in our institutes. I would be perfectly satisfied if I could be able to give a way to arouse some interest in our institutes locally. We were told yesterday that an institute is composed—that is, the authority of the institute is composed—locally of a board, the president and committee, likewise the state speaker. Without a junction of effort on the part of both we cannot have a good institute. We cannot have a good institute if we do not have stricter preparation for that institute. If he (the president) thinks he can get up a program in twenty-four hours he will fail gorgeously. I believe it will depend upon the character of the officials, and the officials should immediately go to work and have a plan and a purpose for the institute. They should have in their mind the certain things that ought to be done; they should collect them, or rather pass over in their judgment—or not necessarily in their judgment, but the combined judgment of the institute officers—a certain gentleman or lady who in their minds will be able to handle a subject ably, and then he or she should be put to discuss it, and the state institute man should follow in the discussion. I believe we institute men should not open every discussion, but sometimes be given the privilege of closing them.

I don't believe that the president should be master of the situation at all times. He must allow liberty. If there is one idea among the people uppermost, and they feel they can well direct fifteen or twenty minutes more to the discussion, and do it profitably, they should not be bound by the program. If the program shows only thirty minutes should be given to that subject, the president should allow the time, which will be appreciated by the audience. The president must be able to interpret what is the desire of the people.

Now, I am sure there are things of local interest that ought to have some consideration—a great deal more consideration than is sometimes given them, and yet there are other themes which in the judgment of a great number are of very little importance. We will possibly lose sight

of the greatest purpose which in the minds of the people is not of very great importance, yet is absolutely of the greatest importance in that community. Ofttimes the speaker must speak of things that will not meet a responsive chord, yet an institute speaker should not try to have a finger on the pulse of the audience and say the things that will tickle the people whom he is trying to instruct, but should say the things which to his mind ought to be said.

Then, I am sure that the most important thing is that we should have a better corps of officers and a better corps of institute lecturers. The business of the institutes of Ohio is a great big business—is more than the personnel of the lecture force—and the very best men in all the community ought to be made head of the local organization. It is oftentimes necessary, or apparently made necessary, to put a man at the head of the organization as they want to interest him. I want to say, friends, if a man is not interested per se, he should not be given any position in that institute simply because by giving him a position they think they can secure his interest and endeavor.

Mr. Abbott: I had no idea that I was coming over here to say anything, I came over to listen. Somebody has said that the boy is father to the man; that means that the boys on the farms to-day are going to be the farmers tomorrow. Now it has occurred to me that we might possibly do more than is done sometimes in our institute to interest the boys. To be specific, suppose that at some session of the institute, there was an invitation to all the boys and girls in the schools in that section to be present, and some man on the institute force should give a talk especially to the boys and girls and try to get them interested about things on the farm. Suppose that institute man should have there on the platform a germination box for instance, and should go through the actual process of filling that germination box, selecting the ear of corn, showing the boys exactly how it is done, and then urge those boys and girls to go home and test their fathers' seed corn next spring. I believe it would do a whole lot to interest the boys on the farm. There is another thing that might be done that is to the point. Tell those boys and girls there is a great deal of difference between the variety of the corn in the neighborhood, and see if they won't try a variety test next summer. Let their father plow the field for them, and let them carry it out, and possibly at the next institute the following year offer a prize of some sort to the boys that produce the best ten ears of corn or something like that. Just as soon as you get the boys and girls, you are going to get the father and mother. Did you ever notice how you get the town out when you have a Christmas tree when Johnny and Mary are going to speak? If we can get the boys and girls interested, we are getting the father and mother interested, and the boys and girls will do some of the things better than their father and mother will, and

they are going to be the farmers and do the things a few years ahead. (Applause.)

Mr. Taber: I ate supper with the worthy Master of the Ohio State Grange. He said he had to make a speech tonight and did not eat very much, the rest of us at that table did full justice to the supper.

Education in a measure is an inspiration. So, then, if you want to get out the local help at the farmers' institute, the speaker must be able to carry to that audience some inspiration. It is true, we must not shoot over every head in that audience, but we must shoot high enough to make them look up. (Applause.) I heard this discussed very fully at the session of the National Association of Institute Farmers at Washington, that the institute, it was believed, was to bring concrete instruction to the grown farmer. I don't believe it altogether. I agree more with Brother Abbott, I believe with the worthy Master in a measure. I know you can teach old dogs new tricks. The farmers are willing to learn and do learn, but the institute speaker who fails to carry a message to that boy sitting back yonder on the back seat has missed the greatest opportunity because that is one of the reasons why we have today this useless talk over in the legislature of probing the high price of feed stuffs. Get back to the land, inspire the boys with a love of agriculture. Now the greatest need that I see is the need of inspiring the tillers of the soil with the magnitude of their calling. Another thing I want to say, bring out the local help, the local talent, it will answer the greatest need, and that is, we want the farmers to learn they cannot get something for nothing. The state speaker cannot do it all. We get a great deal of blame sometimes, but the farmer must remember that he must be able to give to that farmers' institute of his time and his talent; give to that institute the best that he has and the best will come to him. The speaker must have a message. Every time, brother, that we face an audience we must feel we have something we want to say to that audience for the good of the audience; we must have a desire as I say, a love for agriculture, an honest desire to do something more than to earn that \$5 a day. (Applause.)

Mr. Spencer, of Trumbull: I wondered when I first went on to the institute force what I could say that would interest the people in all sections of Ohio, being myself a dairyman and all I knew about farming was what I learned about a dairy farm. I thought that when I went into this section of the state where they didn't carry on dairying to any great extent that my message would be a failure, and yet to my surprise these are the very questions that I have succeeded in getting the audience most interested in; the question I supposed that they would not be very much interested in, and I did it in this way. I tried to associate with the idea of dairying the other idea that Dr. Thorne brought out in his message today, and that is, that it was the best

method of keeping up the fertility of the soil. - I think the institute lecturer that goes to the northern part of Ohio from the southern sections of the state did not bring us much of a message, they were talking horses and shorthorn cattle and things of that kind, things that we don't care very much about in northeastern Ohio, but there are messages that they can bring out, and one is to bring out the idea in this audience that we have the best fruit section in Ohio if we only just knew it. I think the institute man going in that section of the state ought to discuss the question in a way to awaken an interest in the fruit subject. So, I don't hesitate when I go into the various institutes of Ohio to discuss the subject of dairying, and always get a good respectable audience. I think by introducing some of these subjects, we can get up a better discussion possibly that we can by less talking upon the things we are engaged in.

You know that in the great sections in K \_\_\_\_\_ of tobacco. The commissioner of agriculture told us he wanted us to talk on these subjects because it was what the people needed, and I told them that they knew too much about tobacco growing; it was not necessary for anyone to come there to tell them anything about it, and thought they ought to be interested in other things that they might be able to advance themselves in something besides tobacco in order to build up the agricultural interests in that state. So, I believe if we will introduce some of these subjects in some of these localities where they are not interested, possibly we might bring out a discussion on the subject that will result in great good, because, as Dr. Thorne says, it is the only way we can bring up the fertility of our soil and maintain it, is to keep live stock on our farms.

Mr. Dunham: One of the greatest things in my mind that confronts an institute in Ohio is to have a state speaker come there that knows it all or at least convinces the audience that he knows it all, and there is nothing left for them to say. (Applause.) I believe in that. Two or three speakers here have talked about inspiration. There is a sense of inspiration that comes over everyone of us when we go into a strange locality. That inspiration should govern us. The institute speaker ought to tell his message in such a way they want some information, and when you do that, you get the trembling one up; the institute man can't do it all, therefore the local man must do it, and to do it in the best way is to have four or five people posted in your own institute to get up and make a talk on not what they believe particularly, but bordering on something someone else believes is erroneous may be, and in that way you get them on their feet; and in that way you get them to thinking, and when you get them to thinking, you will get them in a trap, and when you get them in a trap they will get out, and they will get out on the floor too; and when they find out they can get on the floor they are eternally at it, and that is what makes your institute.

Now, one of the greatest things confronting the institute in Ohio is an overcrowded program which invariably runs into entertainment. I know some institutes over the state of Ohio, reported by you good fellows as being first class institutes, they ain't no such thing, because the only thing you hear these people talk about after they have gone home is the good time they have had. But how to raise the crops and how to get the per cent. of fertility, or how to add the phosphorus or the per cent. of fertility that you have told them, they don't know a thing about it. The thing is not only to interest them, but to give them a living fact that lives there and stays there. I want the institute speakers of Ohio—I was going to say thank God, I thought I wouldn't dare to say that—I want you to judge what you have left behind there by the next institute that follows up there. I have known an institute where there are only two or three dozen people, but I do know there has been good material left there.

Senator Dunlap: Mr. Chairman, ladies and gentlemen: What do you call this—a round table? It seems to me you have been around it about three times now. Somebody agrees with me back in the back part of the house, but there is one thing that occurs to me that I haven't heard touched on here tonight or last night. A serious thing that is confronting the nation today is the supply of live stock. I believe that there should be more live stock men on the institute force. And you are not going to be able to get these men that should be on the institute force for \$5.00 a day; in fact, I don't know how you are going to get them because the men we really want and should have on the institute force are at home busy feeding cattle, feeding hogs, feeding sheep, or some other live stock at the time of year he is wanted on the institute work, but I do believe I recognize this fact that something must be done to increase the output of live stock in Ohio and in the nation as has been pointed out today by Dr. Thorne. The number of cattle in Wayne County is decreasing, has decreased probably 50 per cent. since the war. I think this is true all over the state and all over the nation, and something must be done to bring up the number of hogs, sheep and other live stock, so that the prices will go down. You can't get such men as William Miller of Ross County, who knows a great deal about feeding live stock, who has handled thousands of them; such men as Dan Black of Ross County or Humphry Jones of Fayette County, or Dr. Brown from Highland County, or Mr. Bradfute from Greene County, to go out and do institute work for \$5.00 a day, or perhaps no other sum, but perhaps they could be induced for the love of the work. I say to you it will be a good thing not only for the institute work, but for the people of the State of Ohio.

The Chairman: Any phase of institute work will be in order now. Anyone is at liberty to speak. Make your talks concise, short and to the point.

Dr. Thorne: I have been very much interested in the question presented this evening by Mrs. Brubaker. For fully twenty years I have been talking to the farmers' institutes in Ohio, and I have been talking to audiences which in the majority of cases are nearly half women, and they have listened patiently to my talks about manures and fertility of the soil, and I have wished over and over again that these women could have had for their interest the opportunity that the men were having for their work. Now, I had the privilege this past winter of attending a few of the extension schools of the College of Agriculture, and in two of these schools were sessions for women, sessions held in separate rooms, led by Mrs. Prof. Crook, of the College of Agriculture, and, mind you, the women that attended those schools did not get in free—there was an admission fee of one dollar a student. In one room there were present 35, in another room 135 or 140, and I know Mrs. Foot had most enthusiastic classes, who were going not simply one or two days, but for five or six days in the week, and attending two or three sessions each day, and listening to her explain the philosophy of making bread and of other household work—not only the ordinary household work, but the adornment of the home and such questions as that—questions in which they were intensely interested, questions in which the men were interested only at second-hand, and I know if those extension schools of agriculture did nothing else but interest the farm women of Ohio in those questions they would abundantly and a hundred times overpay for all their expenses.

Now, gentlemen, the women need our help in this respect. We need to suggest to them that they hold such sessions for their own use. If they cannot get such teachers as Mrs. Foot, there are others just as good, no doubt. Let them hunt for those teachers, and then you turn in and help them get teachers.

I think it has been one of our lamest features of our whole Ohio institute policies that we have not taken up and seen that the women of our farm homes have a place that will instruct and interest them in the farmers' institutes. I confess we have been selfish in the past.

Mr. Johnson: Timid as I am, I feel that I wouldn't be doing my duty if I didn't say something this evening about institute work. I want to say honestly to you that I engage in this work and like to be in it for the little good that I can do my brother farmer, and I am proud to say (you will pardon me for a little personal vanity) that a lady and gentleman who were just now sitting by my side were active in the first institute I ever attended in Ohio and got paid for, and I am glad to tell you—not knowing what we got from the state, and not caring—I was engaged. I sent the terms, and they engaged us. I am not saying this by way of boasting, but to give them the credit. When I took my team, and thought I could drive to that place, about twenty miles from home, it got so bad that I had to go around by Toledo, and they insisted and

made me take part of my expenses, and that year I got more from that institute than any institute in Ohio, and they paid it out of their own pockets—an independent institute, I am proud to say, and I am glad to see them here.

I think that the friend who said we should follow a program is right. I believe at that institute they followed a program absolutely twenty years ago.

Sometimes the programs are much too crowded. I remember one time in Eastern Ohio of attending an institute when the clover talk was crowded out and another talk and another one. At the first institute I attended this winter there was an experiment made of soils, and how the water would crawl up in the soil right before your eyes. This was shown by the use of lamp chimneys. He took me to one side, and asked me if I would stand by his theory. I told him if he had a theory that would work I certainly would stand by him.

I say get the local talent interested, and I was going to say, while I do not believe in tweedling to an audience, I do believe you ought to get in touch with them, and if you cannot you ought to get off the force. You ought to have the audience in sympathy with you and you in sympathy with them, and then have a message to give them, and they will hear it. (Applause.)

Mr. Rice: These thoughts have been very good, and most all of them. I was pleased with the view of the Master of the Grange. But there is another thing—we not only want theory and good instructions, but we want some practical results. We want to impress upon the people that they practice what has been preached—that they remember the lessons and practice them. I believe the institute workers will come nearer the point than the farmers do after they get there.

But that is not exactly the point that is of most interest to the farmer. If our institutes were just starting out for the next six months, or next three or four months, the question of what is to be done with all this vast amount of money that the farmer is supposed to be making would be the question. It is in every paper, on everybody's tongue, how prosperous the farmer is. I once heard an old gentleman, addressing the National Farmers' Alliance at Indianapolis, say that he had two sons. He thought he could put them in pretty good shape by about \$10,000 apiece. One he gave the money, and the other the homestead and farm stock. The money lad went into the banking business, and in a few years he was in a shape he could hardly count his money. The other lad was struggling along with half what he started in with, and still had managed very well.

The burning question in '90, '91 and '92, was we had an overproduction. As I went home from one of these trips I saw a train of cars on a siding in the Scioto Valley at Waverly—a farm owned by a man named Seymore, if I remember correctly—and being loaded with corn, a train of

cars at 17 cents a bushel. I saw 16 trains passing over the B. & O. road to France. The trouble with them at that time was not so much over-production as under-consumption. And the question is, What, with that amount of money, with the farmers making what they are getting today, how are you compelled to use it? The Ohio legislature is laboring now on a probe because the people have to pay too much for what they eat. It is all aimed at the farm products. The farmer should study now the economical questions which will save him money or give him money. With the conditions of this that are charged to the trust of the system of the country, do they consume our money when we get what we earn, and is it not a matter of great importance to understand fully as we can those things?

What I wish to call your attention more particularly to is the appraisement of real estate in the state of Ohio that is now pending. Do you know where that is going to go?

Mr. Phelps: I think the farmers' institute lecturers should study the market reports and the reports which have been given by Watson (?) of the National Stockman during the last three years. The farmers' institute is made up one-half probably from the citizens of the town where you hold the institute. You want to teach these people that it is in the hands of the farmer to feed the people. For the last three years we have had very bad seasons. It is nearly three years now, two years last March, we had a snow. There was only a few days of sunshine in April; May was a wet month. The ground was cold. Now you people who live on lands where there is a gravel subsoil or limestone subsoil, can raise a good crop of corn in the wet season and a good crop of oats. But in this country it is flat, a good deal of flat country, and we did not have a successful crop. The speakers in the farmers' institute have not told the people that a year ago last summer the corn crop was short and every farmer who had hogs had to feed them and put them on the market. There are not more than 20% of brood sows in the hands of the farmers today that there was six years ago. In these institutes they should teach the people who are the consumers that the product is very small compared with what it was three years ago. Hogs and cattle are very scarce, and that is the cause of the high price of the products.

Mr. Beggs: It does not lie with the state speaker—the state speaker does not come into the community until the time of the institute, and the local talent has already had the opportunity of becoming interested before the day set for the institute. I have had a good deal of experience in every phase of institute work. I was the first man, I believe, ever to start an institute in my town, and last year we hadn't had any for a good many years, and the first thing I did was to go around and get the institute men and the farmers interested in it, and then what did they do? I said to the young farmers and farmers' wives whom I



knew had made a success, "We are going to have two good speakers, and I want you to prepare a paper for this institute. You know what you know about this particular subject and I want a paper." They said, "I can't do it." I said, "You can do it; you try it, and then submit it to me, and if it is necessary I will tell you whether it is adaptable to that institute or not." We did that and we had alternately local papers by women and men. One other point, and that is very essential to awaken an interest in the community, thoroughly advertise the institute. Read your paper, see how your merchant and politician with great head lines advertise, the politician advertises when there is going to be a political speaker. In another way try to create an interest in that special meeting. We did that same thing last year with large posters, describing speakers who were to be there, I want to reach the farmers' institutes and say, "You do not do enough advertising in advance." At one place we wanted to find the hall in which the institute was to be held, and we saw a little square card like a business card, stuck up on a post, and we stopped and looked, and that was a notice of the farmers' institute, and my good Brother Moore stopped a farmer on the street and asked if he knew anything about a farmers' institute that was to be held there that day; he says, "I don't know, I live out in the country and am not interested in such things." Now, good citizens, I want to say there is nothing that will interest the people more than to get some of their own people of the community to take part, as has been so well said by Brother Judson tonight and others; and that will develop talent, will develop thought, develop work.

Dr. Brown: I thought it would be wicked not to contribute something. What the speaker said that just sat down is true. I think there is a way of getting men in the habit of expressing themselves intelligently that has not been practiced in farm communities. That is, let a local farmers' club be organized and run by a committee and have monthly meetings during the winter, and have a program each time, and require your friends who know something about farming to come out and express themselves, and when they get in touch with that kind of endeavor they are always willing and anxious to assist in anything of that kind. I am impressed with this fact that the institute speakers must be improved. I say that, with the knowledge the institute speakers have done the largest work of any body of its size in the length of time concerning which history I know anything about. They have educated the people, much to their credit and honor, to the point where the people are demanding something better.

And when one confines himself to the things which one has experienced himself he contracts his usefulness to an enormous degree. There is no question about that. If a well educated man on any subject has a problem presented to him he recognizes what the result will be whether he has had the experience or not. If a chemist has never solved a chemical

problem, if he is an educated chemist he can tell you what will happen if two chemical elements are combined. If a physiologist who has never seen it done were asked what would be the result if the artery was punctured, he would think a minute, and say, "Why, that would paralyze the diaphragm, no doubt," because he is capable of taking a question along his line of education and tell you what the result would be under those conditions.

The old gentleman who meant well and who talked well and who is all right, yesterday, said that a man with 19 subjects is clearly out of the question. Now, the truth is, that if all those 19 things were pure, simple problems of agriculture, and the man is an agriculturist, of broad education as an agriculturist, why, then, he knows 18 parts of that business, and if he is a capable man, he knows a hundred parts of some other business, and it is the duty of institute speakers to make themselves broader, to increase their vision, to enlarge their scope of concept, so that when any problem is presented they have sufficient depth of ability to take that problem and work it out in a common sense way. The man who expects to do a thing, a large thing, which is of extensive scope, and base it all upon his own experience, is an extremely narrow man, Mr. President. The experience of one man in any particularly large department of our business amounts to nothing. It is the aggregate of experience of all men, which if you are a scholar you will attain, the knowledge of which makes men capable.

Mr. Stabler: I would like to say a few words along the line which has been mentioned by Mrs. Brubaker and Mr. Thorne. We feel in our state that that is our greatest problem, and from what has been said tonight, I believe it is your problem, because it is the problem that the least has been done to solve, and it is as Mrs. Brubaker has said the vital problem in farm life today, the education of the young ladies principally to be housewives, as well as to enable them to do their work more efficiently with less labor, with more intelligence, to have more leisure to devote to the improvement of their minds, and at the same time to make better homes than their mothers and grandmothers were able to do with the education they had. I believe in educating the country girl for country life, just as much as I believe in educating the country boy for country life, and I believe that the institute has a part in this education. Now, to illustrate what I think is not the proper way to do it, I will simply give you a little outline of a ladies' session which I recently attended in an Ohio institute. We were told when we came to that locality, by the president, who met us at the railway depot, that there was to be a ladies' session in the afternoon of the first day. We inquired what were some of the subjects that were to be discussed. I asked if there would be some domestic science introduced or home economics, or something of that kind. "No, I don't think there will be; there won't be anything of a striking nature, but you will be royally

entertained. So we found. There were at least a dozen numbers on the program. Some were music; some recitations by little girls, about that high, and there was one paper by the wife of a professor on the renaissance of Italian art, and it was about this long, and her voice gave out before the end, for which we were profoundly thankful. There was but one paper read at that ladies' session that was worth the time it took to read it. The rest was a waste of time for 400 people. If you are going to have a ladies' session that is worth the time you must have it presided over by a person that will hold the people to the object of the meeting, and not make it a place of high school entertaining.

The Chairman: I am going to change the program, and I am going to give each the right to ask another a question.

Mrs. Brubaker: I would like to ask (reporters could not hear this part) must have something in themselves, they can live in town and be entertained?

Mr. Stabler: Why, I believe the girls should be interested in their environment that they should be able to get interest and enjoyment and pleasure out of country life as they find it, just as the boys do.

Dr. Brown: That was a most pertinent question that the lady asked, notwithstanding my distinguished friend here. That is true of every individual. Persons that are dissatisfied and uncomfortable when alone, are persons that have not trained themselves to enjoy life and get amusement from within, and that is one of the very most beautiful characteristics of an individual, one of the most beautiful attributes of a person, to be able to find amusements from within, whatever the conditions, and that kind of person is of the highest type.

Now, as to this question. Of course you want me to tell the truth about it, don't you? And I don't believe in mincing words or attempting to discredit the truth or joke about a matter of that, however it may have been presented. I don't do it, in the first place, because, I can't afford to do it for \$5.00 a day, and the next place I cannot run the risk of getting sick and endangering my health by sleeping in all sorts of beds and in all sorts of conditions, and the next reason is, I am not capable. I simply want to say to Mr. Scott that I was more capable than some of these fellows, meaning him, in many directions, but I really couldn't go into the institute work and be a success in all the lines that are necessary for a man to be a success in. He insists upon me answering this part of the question which he did not present to the rest of you, "Could any man leave his work?" Yes, I think every man ought to when the state calls upon him to; and I think furthermore, if all you fellows hadn't been doing institute work and meeting people and coming in contact with men of affairs and becoming men of affairs yourselves, and men that can depend upon themselves and get upon their feet and maintain themselves, and if you hadn't made such men of yourselves, I don't think you would ever have been able to accomplish it. The fact

is, and I hope you will give me the credit of being sincere about it, the nicest men I ever met were institute fellows; now, that's the truth. Somehow or other they come in contact with the best people in the world; they become broadened in their own conception, but the beauty of it is, they become elevated in their sentiments and affections and finer elements of their characters, and there is not a man, no matter what his attainments are, under the canopy of heavens covering this state but can find entertainment and pleasure in listening to these gentlemen.

A member: I would like to ask what institute speaker has the most work on the force.

The Chairman: Our brother, John Begg.

A Member: How does he happen to have that?

The Chairman: From experience and ability.

A Member: That's the point I want to make exactly, and another point I wish to make is, I believe he said the institute speaker don't have much to do with the local talent in getting them out at the institute. I have heard of John Begg over the state. In Warren County they say, "We want John Begg, that old farmer that's just like we are, that does things like we do. He can tell us how to do it." The fact is that Brother Begg has a way of getting down and getting hold of the farmer. The fact is the institute is not like a day school that will take a child in the kindergarten and move him on up. You are only there for a day or two, and the only thing you can do with us overgrown children is to teach us to think a little bit, you got to get down to me in such a way that I will think. Brother John Begg is a success. I believe he can get more discussion that will follow in the way of information from his talk than from any other man that ever came into our town. But Dr. Brown made a splendid talk right then, but with his message he would say he punctured an artery and paralyzed the diaphragm.

Dr. Brown: That's not what I said.

A Member: Well, you didn't make your talk plain enough so I knew what you did say, and that's what the institute speakers are up against today. I will tell you another thing, when an institute speaker comes to going out to make a business of it to get a lot of money out of it he had better stay at home.

Senator Dunlap: I would like to ask Dr. Brown whether he thinks a man must be an all around institute man in order to be a successful one.

Dr. Brown: That's a good question. If he were an all around institute man, he would be more successful than if he were not. He can't be an all around institute man in every instance, but he can be informed like this: he can teach probably from his own experience on one line which was outside of live stock, he can learn the advantages of live stock which does not come from special experience. Dr. Brown

don't own a foot of land, but he knows all about the advantages, and many men know what the statistical conditions are of the country with reference to certain materials or live stock or anything else that the country produces and he can teach all those things very well and give encouragement to the men who contemplate going into it, and the man who hasn't experience along that line to say what the usual profits are easy enough, and can certainly encourage a man even though he doesn't know the how, but he knows the results in a general way if he is an educated man. We had an educated man on the stage today, we had several of them for that matter, but when president Thompson got on the platform he was talking about things he hadn't had any experience with, I am sure, but he gave us facts, and put force in his talk, and clothed the facts with language that was interesting, and he carried us all away. Now, he really didn't know anything, but he teaches and preaches. I heard him preach 25 years ago, and he has been doing that all his life, but he can get up on the platform, and because he is an educated man can interest us as much as anyone in the state in anything he undertakes to handle.

Senator Dunlap: I would like to add that I think one of the most successful institute men I ever traveled with was a man who didn't talk anything else except soil and subjects pertaining to soil; so, in my opinion, I don't think a man has to be an all-round man to talk about live stock, the dairy, horticulture and everything under the sun in order to be successful, and I think we can be successful and stay to our own line of work.

Mr. Blackford: We have in a great number of the institute organizations the man who likes to widen his mouth and everlastingly to hear it go, to the infinite dissatisfaction of the audience. What are we going to do with people of that sort?

Dr. Brown: Why, put Wagner after them.

Mr. Judy: Brother Blackford knows how I do. I believe he was at an institute when I was president, and I made him sit down.

Mr. Blackford: Mr. Judy is all right. The president ought to sit down on any man of that kind, and oftentimes they don't do it, and I hear more complaints due to the fact that a great many who don't know anything about it fails to realize that he does not, and the matter is a source of disgust to the people on the outside, and is one of the reasons why a great number of better men do not attend our institutes. There is another class who have been appointed upon the institute lecture force who immediately inspire the people of the audience with the fact that he does not know anything about the subject and not acquainted with their limitations. They go away the first session in disgust, and do not come back the next year, though there is some one amply able to instruct the people of the institute. And so the situation is pertinently one, I think, for the institute man to be everlastingly on his job, and if

any of us fail to keep a little ahead of the procession we ought to be lopped off, regardless of who we are and the circumstances involved, for the institute business is infinitely greater than the personal regard of any fellow who may aspire to do institute work.

Mr. Farnsworth: I believe it lies nearly altogether with the local people—the management of the institute. I have been with some good workers a number of times. You strike an institute where they give out question after question—they can hardly get through; go to another institute, same speaker, and it is impossible to get any questions. It depends upon the local people. The speaker knows the ones who can talk, and he can call upon them, and they feel duty bound to respond.

Mr. Judy: I want to say one of the best institutes for having local help I ever attended was down at Jeffersonville. He had more young men posted to sit around through the audience to discuss the subject and ask questions than at any institute I ever attended. He had forty prepared ahead of time, and that's simply what our brother here said. I want to emphasize—have preparations made ahead of time, and have your pickets on guard, and have them around with their popguns all loaded, have every discussion opened, and then have the popguns ready to fire.

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FRIDAY, JANUARY 14, 1910.

10 O'CLOCK A. M.

Meeting called to order by the President.

Music by the Angelus Quartet.

The President: There is one thing we would like to do, if possible, to head off the dread disease, hog cholera. The State Board of Agriculture, through its Live Stock Commission, has rendered to the farmers in almost every section where hogs are grown a great service, and the future promises well along these lines. There is a man here who is taking this up, who has gained the greatest results with this hog serum—Dr. Paul Fischer, State Veterinarian, a man of ability, and one who speaks as one of authority, and we are to have the pleasure of hearing him speak today.

Mr. Williams: We will now hear the report of the Committee on Resolutions:

WHEREAS, The ravages of hog cholera in the state of Ohio often deplete localities of our hog product, entailing hundreds of thousands of dollars loss of food product, of which the farmer is the principal loser, therefore be it

*Resolved*, That it is the sense of this annual meeting of State Farmers' Institutes of Ohio, that the Ohio State Legislature should appropriate such an amount of money as will securely help the State Live Stock Commission in stamping out this hog cholera—fatal destroyer of our meat product.

*Resolved*, That we congratulate the farmers of Ohio upon the universal evidence of an awakened and increased interest in the great business of agriculture.

*Resolved*, That we favor the establishment of a parcels post and a system of postal savings banks by our national government.

*Resolved*, That we are in favor of a national conservation policy that will preserve, for the use of the whole people, all of our great undeveloped natural resources.

*Resolved*, That we favor state and national aid in the improvement of our highways.

*Resolved*, That we favor the enactment of a law prohibiting the adulteration of all kinds of seeds.

*Resolved*, That we heartily commend and approve the work done by the Ohio Department of Agriculture, through its various divisions, as evidenced by the success of our annual state fair, the good work of the Live Stock Commission, the department of Nursery and Orchard Inspection and other divisions of the department, and we urge upon the legislature the necessity of such increased appropriations as will enable the department to carry on and expand the work of its several divisions.

*Resolved*, That we congratulate the farmers of Ohio upon the excellent work that is being done by the Ohio Experiment Station at Wooster, and by the Ohio Agricultural College at Columbus, and in its various agricultural extension schools, and bespeak for them such support from the legislature and the people in general as will enable them to extend their experimental and educational work; also that we heartily recommend elementary agricultural education in our public schools.

*Resolved*, That we heartily commend the excellent work that has been and is being done by the Ohio State Dairy and Food Department in the interests of the farmers and the general public.

*Resolved*, That we are emphatically opposed to the repeal of the present law governing the manufacture and sale of oleomargarine, or any change in the law that will affect its efficiency or weaken it in any way as a protective measure for the great dairy industry of the United States.

*Resolved*, That we commend the work of our local, state and national corn improvement associations in creating such increased interest among farmers and other business men, in the production of better yields of this and other important farm crops, and that we express our hearty approval of the action of our State Corn Improvement Association, at the meeting just closed, in their endeavor to secure the location of the National Corn Show at Columbus, Ohio, in January, 1911, and that we join our efforts with theirs in bringing that important meeting to the capital of this state next year.

WHEREAS, An allwise Providence has seen fit to remove from our midst our co-laborer and companion in institute work, Mr. J. Al. Dobie.

*Resolved*, That we herein express our sincere sorrow at his untimely death; and while we bow in submission to the divine will, we shall ever keep, in loving remembrance, his noble and manly character and genial disposition, and the efficient service performed by our deceased brother; and that we extend our sincere sympathy to the bereaved companion and family of the deceased.

*Resolved*, That we tender the sincere thanks of this institute to the secretary and members of the Ohio State Board of Agriculture for valued services in making this meeting a success; to the Angelus Ladies' Quartette for furnishing such delightful music; to the various men who have given us such instructive addresses; to the Chamber of Commerce of Columbus for the use of this auditorium; to our esteemed president, Mr. C. R. Wagner, for the prompt and businesslike manner in which he has conducted these meetings; and to all others who have in anyway contributed to the success of this annual institute.

*Resolved*, That we believe that a resolution providing for direct legislation in a fair and practicable form should be submitted by the legislature to the people of Ohio for their approval.

JOHN BEGG,  
JOHN T. CUNNINGHAM,  
GEO. E. SCOTT,

Committee.

#### THE SIGNIFICANCE OF PURE BRED LIVE STOCK TO THE STATE.

By Prof. C. S. Plumb.

(Professor of Animal Husbandry, Ohio State University.)

Mr. President, Ladies and Gentlemen:—The 14th of July is the national holiday of France. It commemorates in that country the Independence Day on which France became a republic, on the same basis that the 4th of July commemorates Independence Day in this country. On the 14th of July, 1903, I took a cab from the very heart of the city of Paris and drove something like four miles out into the suburbs to a large park and race course, in order to see the French army in its annual review before the president of France, his cabinet ministers and a numerous concourse of people. The drill began at eight o'clock in the morning. I got up much earlier than is customary with people in Paris, in order to be at the grounds by eight o'clock. I found an enormous line of vehicles, automobiles, horses and carriages, and a great throng of people on their way out there; and half an hour before I reached the place every team was going at a walk, and finally I had to leave my carriage and walk some distance in order to get to a place where I could see the review. The review was before a number of immense grand stands, capable of seating many thousand people. The field was an immense one, much larger than our state fair grounds, with an open fence all around; and when I tell you that there certainly were five hundred thousand people witnessing the event, you can realize that the people of Paris and France were greatly interested. It was probably as large a gathering of people as comes together in Europe or the United States to see any public event.

As the army corps came swinging by the grand stand the thing that interested me most was the cavalry and artillery horses. In the neighborhood of thirty-five thousand to forty thousand soldiers passed in review before the stand, in regimental formation, and I should say there were at least twenty thousand horses. I was profoundly impressed by the uniformity of the horses in appearance, size, etc. They looked as though they were pure bred, as though they had been singled out with the purpose of having only the finest type of horses. In view of the fact that I had learned long before that the French government cavalry service was the finest in the world, I could recognize its significance when I saw those horses going by.

The people of France for centuries have promoted the horse industry. In 1714 the government established a government stud at Le Pin, and in 1755 at Pompadour another government stud, and excepting the time during the French revolution, they have been in existence ever since. In addition, the government, in order to improve the horse industry of France, has long owned a large number of stallions for service in that country.

Coming down from that time to 1870, we find the French Department of Agriculture, under supervision of the Minister of Agriculture, taking charge of the horse industry of France and establishing what they call their national haras,



or stud. They have a director, a number of subdirectors, and a corps of veterinarians who give their entire attention to the development of the horses of France. In order to bring you to the present day, and to show you what the significance of the movement in France has been in the development of the horse interest, I want to call your attention to some facts to showing something of what France has done and is doing in the horse industry.

The total number of stallions in France on December 31, 1906, according to the official records of the director of the studs of that country, was three thousand three hundred and forty-eight. These are divided into groups of thoroughbreds, representing the English, Arab and Anglo-Arab, five hundred and sixty-five, or sixteen and eighty-seven hundredths per cent.; the demi-sang, two thousand two hundred and eighteen, or sixty-six and thirty-six hundredths per cent.; draft horses, five hundred and sixty-five, or sixteen and eighty-seven hundredths per cent.

In 1906, three hundred and seventy-two horses were bought by the government in France and abroad.

Three thousand three hundred and twenty-one stallions were located at seven hundred and forty-six different stations, and these furnished stud service to one hundred and sixty-one thousand four hundred and fourteen mares, an average of forty-eight and sixty hundredths mares per stallion, distributed over France. Of the mares bred three thousand eight hundred and eighty-nine were thoroughbreds, ninety-six thousand two hundred and sixty-two were demi-sang, and the rest were draft horses, sixty-one thousand two hundred and sixty-three.

In 1906 approval was given to one thousand five hundred and eighty stallions. Right here I want to make an explanation: In the establishment of their horse industry they finally resolved their horses into three groups, first the government stallions; second, a certain class of stallions of particular merit which they called approved, owned by private individuals who were given sums of money by the government as a subsidy, in amount according to whether they owned coach horses or Percherons, and third, another class called authorized stallions, these latter being permitted to stand in France, but their owners to receive no subsidy. No other stallions are allowed in service.

In 1906 approval was given one thousand five hundred and eighty stallions, which received seven hundred and seventeen thousand three hundred and fifty francs (one hundred and forty-three thousand four hundred and seventy dollars) as subsidy. One thousand five hundred and sixty-five stallions were bred to eighty-one thousand two hundred and seven mares, or fifty-one and eighty-eight hundredths per horse. There were two hundred and one authorized stallions—you notice how they drop down when they do not have the government approval—and one hundred and eighty-nine of these bred nine thousand four hundred and sixty-seven mares, or fifty and eight hundredths mares per stallion.

Let us summarize a little: Government stallions in 1906 bred one hundred and sixty-one thousand four hundred and fourteen mares, approved private stallions in 1906 bred eighty-one thousand two hundred and sixty-seven mares, authorized private stallions in 1906 bred nine thousand four hundred and sixty-seven mares. Of these mares thirty-one thousand three hundred and fifty-four were bred to thoroughbreds, twelve thousand one hundred and sixty-four to demi-sangs (French coach), and ninety-eight thousand five hundred and seventy to approved stallions.

In 1906 there were exhibited nineteen thousand and twenty-three horses at shows in about five hundred different places in France, of which ten thousand seven hundred and forty-five were given prizes. The amount of money given for prizes in France in 1906 at these shows amounted to three hundred and sixty

thousand nine hundred and thirty-eight dollars. Now this is divided up in various ways: Given by national government two hundred and twenty-one thousand six hundred and twenty-four dollars, departments of France where shows were held gave one hundred and twenty-three thousand one hundred and seventy dollars, then certain local municipalities gave three thousand one hundred and fifty-seven dollars, various horse societies gave eleven thousand five hundred and eighty-seven dollars, the Horse Society of France gave six hundred dollars, and eight hundred dollars came from other sources. What is the summary on the money side of it? The money offered in France from all sources in 1906 for improvement of horses in that country, is represented by the following: For horse racing, three million three hundred and forty-five thousand seven hundred and eighty-five dollars. I want to say that the government supervises horse racing, and while the people of all classes gamble or bet on the races, all is done under government authority; but they have no wheels of fortune, or such gambling devices as are common throughout the United States, intended to get money out of the pockets of the people and having nothing whatever to do with horse racing. Fairs and shows, three hundred and sixty thousand nine hundred and thirty-eight dollars; for premiums, one hundred and forty-three thousand four hundred and seventy dollars; for training schools, one hundred and ninety-six thousand seven hundred and four dollars, and then special premiums on thoroughbred mares, eleven thousand four hundred and eighty dollars.

I especially prepared this statement to bring to your attention what one of the great governments of Europe has been doing and is doing today for the promotion of its horse interests.

There are many people who are interested in Percheron horses; it is the great draft breed in Ohio. In going down through the Percheron country—I was with Mr. J. B. McLaughlin, one of our fellow citizens whom many of you know—we visited a little barn where a man in uniform was in charge of a number of stallions. These stallions were brought out and shown us. They stood for service in that community. We went around through the country over wide areas of France. We found everywhere these little places, called stallion depots. The horses in them were owned by the government and stood there for such a time as the Director of the Studs thought best, for the benefit of the farmers. We also visited the great government stud at Le Pin, where we were told there were three hundred and fifty stallions. It was really a great sight to see these horses and what France is doing.

Between the time we were visiting one little depot and the time we later on came to the government depot at Le Pin, one of the stallions we had first seen at the little depot had been taken to the government headquarters. At Le Pin was one thoroughbred horse the government had paid thirty thousand dollars for, and other horses, both thoroughbreds and coach horses, for which high prices had been paid. There were ten English thoroughbreds, as well as Percherons and demi-sang or French coachers.

Now let us briefly look at the policy that has been adopted in the most intelligent countries in regard to live stock interests. If you go to Great Britain and into certain communities, you find the people breeding specific breeds and keeping them pure, endeavoring to produce as high class animals as possible. You will find the grade, as we know it, is not in existence apparently, and the people are strictly engaged in the promotion of the stock they have found especially fitted to their environment. It is characteristic of Europe. The people recognize that it is absolutely necessary to study conditions and keep in touch with what is going on in other countries.

If we turn to the development of live stock in any country where the people

have been successful and find out what conditions have played a part in the improvement of the live stock interests, we will find it is through the use of pure bred animals that the live stock interests have been improved. All over the world are a very few people breeding pure bred animals whom we may call master breeders. We may think that it is the few who are persistently breeding, spending money, working intelligently, lifting the breed up all the time, while the great masses are breaking it down.

The average man who breeds stock leaves it worse than he found it. Or, if he does not leave it worse than he found it, it is because he goes to some one else and buys pure bred sires with which he makes some little improvement in his herd. On the face of it the development of our horses and flocks is absolutely dependent upon purity of breeding.

Over one hundred years ago the Massachusetts Society for the Promotion of Agriculture began to import pure bred live stock to Massachusetts from the old country, and distribute these pure bred animals over that state so that the farmers might improve their stock.

France is going to England to get stock for her use; Japan is coming to the United States to buy stock for that country; little New Jersey, down on the Atlantic coast, through its own state government, sent a committee over to purchase, and did purchase, horses in both England and France. All that is a recognition of the part the pure bred animal plays in the improvement of stock.

In what way has this been a distinct advantage? If we carefully consider the influence of the breeding of dairy cattle of the United States we find in the beginning that an animal making fourteen pounds of butter fat in a week, or from which fourteen pounds butter could be made, was considered rare and a very superior animal. The first Jersey cattle of which we have butter records dates back about sixty years. These made in the neighborhood of fourteen to seventeen pounds per week. Now through the influence of the cattle of Holland and Jersey, there has been a constant evolution in the improvement of our dairy stock, and while the grade herd has been improved the pure bred has shown emphatically that it is distinctly above the grade in efficiency and value. We have in this country today pure bred dairy cows that have produced in the neighborhood of one thousand pounds of butter fat in twelve months, representing Holstein-Friesian, Jersey and Guernsey. We have immense numbers of cattle of the pure bred class that have wonderful records, animals that have made from fourteen to sixteen pounds of butter fat, showing what development has gone on in our country. In 1907 there were one thousand nine hundred and ninety-four Holstein-Friesian cows tested by state agricultural colleges and experiment stations, which averaged three hundred and ninety-three pounds, milk testing thirteen and sixty-one hundredths per cent. butter fat. Among the noted official tests are those of the Jersey cow Jacoba Irene, who gave nine hundred and fifty-two pounds and fifteen and one-fourth ounces of butter fat and Colantha Fourth's Johanna, a Holstein-Friesian, credited with nine hundred and ninety-eight and one-fourth pounds fat.

In a report issued by our government, ninety-nine dairymen had herds of pure bred cows averaging seven thousand and ninety-three pounds of milk, and seventy-eight dairymen had herds that averaged three hundred and forty-one pounds of butter in a year.

Now let us make a comparison with the grade cow. In Jefferson county, Wis., where about two hundred herds of dairy cattle and nineteen herds of mixed cows were studied, three hundred and forty-six head averaged four thousand four hundred and fifty-five pounds of milk, or two hundred and eight pounds of butter. See what a contrast that is?

Let us briefly turn to another phase of the pure blood industry. Ohio, beginning a long while ago, became a great sheep state and long held her prestige as a producer of wool. In those early days, one hundred years ago, sheep would average as low as three and three-fourth pounds of wool, according to Livingston in his noted book on wool and sheep. The improvement that has come along under the influence of the pure bred has brought the average of wool up to six and one-half pounds to the individual in the state of Ohio, while in Wyoming and further west it has amounted to in the neighborhood of eight pounds to the animal. This simply suggests the possibilities of the pure bred. Mr. Bradfute called your attention yesterday to the proposition Ohio has been holding in her live stock interest in the last ten years, and he showed you wherein our state has gone backward. We have done comparatively little to make conditions more profitable here for the stockmen.

I now want to call your attention to a suggestion with regard to our own state: The last Ohio legislature had available as state income and appropriations a sum amounting to eight million three hundred and forty-six thousand dollars, five million of that or sixty per cent. was expended on the national guard, the penal institutions, the charity institutions, and a class of institutions that are more or less a drag on the state at all times; one million four hundred and ninety-eight thousand dollars, or eighteen per cent., was spent on those things that build up and make a state greater and more important. Now, until our legislature makes appropriations which recognize fittingly the importance of the great fundamental interests, the things that make a state greater along the line of conservation, just so long will Ohio not go forward as she should in the promotion of our live stock interests. The total amount of money which has been devoted to agriculture, as shown in the late appropriations, is comparatively insignificant. The Governor fittingly referred to this yesterday.

Now what ought the state to do in order to promote our live stock interests? In the first place we have enormous horse interests. We ought to have a stallion law, a law that will put a premium on blood lines and breeding, which will develop the very best we have in our live stock. At present, here in Ohio, the grade stallion has as much standing as the pure bred. And while there is a long list of states having a law giving the man who has mares and who is using the stallions, some information as to their breeding and their worth, nothing is being done in Ohio along this line.

Let me briefly quote to you from a letter which has been recently received from the Wisconsin University, where Dr. Alexander has charge of this work. This letter was received a few days ago by Prof. Marshall. Summarizing briefly from his letter on the effect of the stallion law in that state, he says that in time, as a result of the enforcement of the law, the number of pure bred stallions has been greatly increased to the benefit of the horse breeding industry of the state, and that the grade and scrub stallions have correspondingly decreased in number and in popularity. Already such effects are noticeable in Wisconsin and will soon be more so since the provision of a special certificate for "mongrel or scrub" stallions.

Since the enactment of the law, more than one hundred unsound stallions have been returned from service to the knowledge of the department, while hundreds of others have been shipped out of the state or castrated, presumably for a similar cause or the fact that they have been unsuitable or could find no patronage when publicly advertised as to their exact breeding, etc.

Over fifty cases have been found in which stallions had bogus, fraudulent, worthless or tampered with registry certificates. There are several bogus stud books in the country and stallions recorded in such have properly been licensed

as grades; some of them will hereafter be licensed as mongrels or scrubs. Many aged horses posing as the right owners of the registry certificates shown for them by the owners, have been licensed as grades on failure of the owners to prove the identity of their stallions as pure bred and recorded.

Passing along in his letter he says: "Since the inauguration of the law, licenses have been issued to one thousand seven hundred and twenty-six pure bred stallions, of which four hundred and seven have been retired for various causes, leaving one thousand three hundred and nineteen pure bred stallions with licenses in good standing. During the same time, from January 1, 1906, to September 1, 1909 (close of breeding season), a total of two thousand six hundred and three grade stallions have been licensed, of which seven hundred and sixty-seven have been retired. Comparing totals we find that in 1907 the percentage of pure bred stallions showed a percentage of forty-two and the grades fifty-eight."

Dr. Alexander states that in their experience they have found that the law has been distinctly beneficial, the horses are improved in quality in the state, and the farmers are getting interested; they are talking of blood lines of horses and the value of blood and breeding, and they consider that the work that has been inaugurated in that state is of distinct benefit.

They have registered in Wisconsin four thousand three hundred and twenty-nine; since the 1st of January they have put out of commission or have retired one thousand one hundred and seventy-four, leaving three thousand one hundred and fifty-five horses in Wisconsin in service.

Now as to the situation in Ohio: On March 1, 1908, we had ninety-nine thoroughbred stallions, seven hundred and forty-four trotting stallions, seven hundred and fifty-six French bred stallions, three hundred and forty-four English draft stallions, including two hundred and ninety other pure bred, and seven hundred and seventeen stallions of unknown breeding, based on figures from our Department of Agriculture, a total of two thousand nine hundred and eighty stallions.

How is the state of Ohio to promote its great horse interests? Is Ohio doing anything? Our horse interests amount to about seventy-five million dollars, and the state is doing nothing. The first step that should be taken by the state of Ohio, as involving the least cost and of being paramount importance to the consumer, is the inauguration of a stallion law.

And now another suggestion, and that is what I had in mind in connection with my talk here this morning, we should have in our state—we will have in no far distant day—some agricultural high schools or model farm schools, at least in certain districts. In these schools there should be kept and maintained first-class specimens of live stock, and sires should be made available at a minimum cost to the farmers of the community, and each community should have the class of animals best suited to local needs. That is a thing that could be easily done, and if you can realize the value of having high class stallions and high class bulls located in a community for the uplifting and upbuilding of the live stock interests you will easily see it will be a large work for good.

Another thing, we have in Ohio a large number of what we may call charity institutions, the insane asylums, feeble-minded institutions, and many of these have farms and keep farm animals. Those institutions should be made to serve the best interests of the state from a live stock point of view, and should be required to keep a pure breed of live stock, and not only that, but that live stock should be of superior character and in the hands of competent men. Every year the officials in charge of the institutions should be required by law to make a report of the class of stock they have and upon the work that the individuals are

doing. The state of Ohio cannot afford to keep a lot of common, ordinary animals as a lesson to the people of the community. Here is a work the state can do in order to promote the live stock interests.

I want to say in conclusion that there is an overwhelming amount of evidence to demonstrate that the grade or the scrub is unprofitable, an overwhelming amount to illustrate that the pure bred is the salvation of the live stock of the country. I hold that it is the bounden duty of the state, as expressed through its citizens, that our government should by some means champion the interests of improved live stock, and see that each year Ohio takes a higher and higher position among the states of the Union in the character of its live stock and not be outdone by the states around us while we sit and do nothing

Mr. Laylin: I desire to submit a resolution to this body. It has been submitted to your committee and they have decided it was not in their province, inasmuch as it asked for a committee for the purpose of securing information. Further I desire to say that this resolution, practically as it is, was passed unanimously by the Ohio State Grange, and in furtherance of their wishes I present it here for your consideration.

Motion that the resolution be adopted; motion seconded.

Mr. Bradfute: I do not believe we could act understandingly on this question at this time. I move we lay this on the table until we know exactly. I am utterly unable to act intelligently upon it until I know something about the situation involved in it, and I move we lay it on the table until 3 o'clock.

Mr. ....: This calls for a committee and if the resolution is passed this committee would have the time from now until this afternoon to get the information, and I believe the resolution ought to pass and a committee be appointed and instructed to report this afternoon. It is information I should like to have. Let us pass the resolution and let the committee go to work and bring in the report.

A Member: Is that all the resolution calls for, the appointment of the committee?

Mr. Laylin: I will read it again. (Reads resolution.)

.....: Why not amend so as to make a report at this afternoon meeting?

.....: I second the resolution as amended, that a committee be appointed to report this afternoon.

Mr. Laylin: There is no need of an amendment because I accept it.

WHEREAS, The department of the attorney general did secure some samples of fertilizers from several fertilizer companies and had said samples analyzed at state's expense, and

WHEREAS, The said analyses have not been published; therefore be it

Resolved, That a committee of three be appointed by the chair to secure a copy of these analyses from the attorney general, and that we request they be published with the proceedings of this association.

Question read and corrections accepted.

The Chair appoints Mr. Laylin, Mr. Cromley and Mr. Geo. Willma, to report this afternoon.

Mr. Dunham, of Warren: Being thoroughly convinced from a personal standpoint of the Doctor's treatment of hog cholera, it seems we left it rather indefinite here and I have blocked out a resolution, but didn't have time to submit it to the Resolution Committee and I ask here to submit it.

Report of Committee on Nominations.

Motion to accept report made, seconded and carried.

President, J. S. Brigham, Bowling Green,

Vice-President, A. H. Judy, Greenville.

Signed Chas. McIntire.

L. P. Bailey.

R. C. Prugh.

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## AFTERNOON SESSION.

January 14, 1910.

### AGRICULTURAL EDUCATION IN RURAL SCHOOLS.

By Hon. J. W. Zeller, State Commissioner of Public Schools.

Mr. President, Ladies and Gentlemen:—I am glad for an opportunity of addressing this representative body of ladies and gentlemen upon this, the most vital subject now before the American people, "Agricultural Education in Our Rural Schools."

I am very sorry that I have not had time to give you a carefully prepared paper upon the subject, but the press of business in the office has not given me time to reduce what I have to say to you in writing. I want to discuss this matter briefly from three standpoints, first, the need of agricultural education; second, what the states of the middle west are doing, and third, what I think Ohio ought to do and can do.

As an introduction upon the need of rural education, I want to read you a little statement I noticed in the great daily papers going their rounds yesterday, the most recent utterance upon this subject: "Must raise more per acre, says President Brown." Let's see who President Brown is. "Boston, January 13th." That's quite recent. "We must increase production per acre by more intelligent methods." "We must," he says, "increase our production per acre by more intelligent methods," that is, by scientific farming, "or we must face the relentless certain day when we shall not produce enough to supply our own necessities," said President William C. Brown, of the New York Central Railroad, in an address last night before the New England Railroad Club. Not more than six months ago a voice like that came from the great Northwest. J. J. Hill, another great captain of industry, gave expression to the same idea when he said, at a notable gathering of the great Northwest, that the time would come, unless there was an awakening, when we would have to import breadstuffs. Here come two voices, one from the East and one from the Northwest, uttering these words of warning against indifference to this greatest industry which is the great fountain

head, the foundation industry of all the industries of this country, agriculture. I simply give you these two as types of thought that is nation wide.

Now the need. I need not dwell upon this long; I think you men are thoroughly awake upon this subject. Not more than five weeks ago I was asked by the Master of the State Grange to come to Springfield to meet the educational committee there. I was in session with them two and one-half hours, and I never met anyone more eager to get hold of something practical in an educational way in this matter of agriculture. And the next day I was asked to address them, and the Master met us in session during the holidays. I say the people are becoming awakened on the subject of agricultural education. I need not call your attention to the fact that there are everywhere farmers who cannot get enough laborers to do their farm work. Let me give you one example of hundreds of cases right here in Ohio. Representative Wisener, of Van Wert county, a member of the general assembly, told me, at the table the other day, he had seventy-five acres of corn not husked, simply because he could not employ men enough at reasonable prices to have it husked at the proper time. It is a difficult problem, all over the state, to keep enough young people upon the farms to do the work properly.

I need not discuss that foolish notion that is too prevalent in Ohio, that the climate has changed so rapidly here because we have cut down our forests, that we cannot raise any apples. You men saw it demonstrated here the other day, when a fruit grower from Ottawa county made an exhibit here in the city. I am personally acquainted with him, and was in his orchard. He told me he shipped five hundred barrels of apples to New York. He showed you it was not a matter of climate. A man from southern Ohio showed you it was not a matter of climate, that it is ignorance upon the subject of horticulture. These two men demonstrated in northern Ohio and in southern Ohio, and in all other districts, that it was a matter of ignorance, and not of climate. That man in northwestern Ohio sacrificed his farm in order that he might save the great Chautauqua at Lakeside, because he became familiar with this subject, and had a theory and worked it out. He saved his farm and paid his mortgage by raising three thousand dollars' worth of apples on twenty acres.

I want to call your attention to something else along this line. It is largely our own fault that we have not made more progress in agriculture. There is now a tremendous awakening. We see our boys leaving the farm. We are educating our boys away from the farms. May I give an example? At home in the county seat, Findlay, we had sixty-two boys and girls, Boxwells, in the Findlay high schools, Van Wert fifty or more, and the same is true in all the county seat towns and cities. Of the fourteen thousand boys and girls, seven thousand of them were not in your own country schools at all. You were educating seven thousand away from the farm, because seven thousand were in the county seat schools. You take boys and girls and do not furnish them the opportunities of a high school education at home, and you will see them go to the county seat high schools for four years, and thus they lose the agricultural spirit. I need not argue the matter. You cannot send these boys and girls away from the farm four years, away from the rural spirit, and expect them to return with a rural spirit. It is wrong that seven thousand boys and girls must go to the country school for their high school education. I say it is our fault largely. We are educating the boys and girls away from the farm. What happens? The superintendent of Van Wert county told me quite a number of men every year were moving in, following their children to the county seat, that they might have them educated. What does that mean? It means so many less producers and so many more consumers. They face that same question at Findlay. I know year after year,



each year there are a dozen families moving in from the farm because their boys and girls are in our high schools. That means taking away so many producers and adding so many to the consumers. Take Toledo, or any other city, our boys and girls are running to the city getting jobs at forty, fifty or sixty dollars when they could make infinitely more money at home if they were given the opportunity of scientific farming. I do make the charge that it is very largely our own fault, and when we wake up to a sense of our duty along this line, and make the schools in our townships equal in extent, giving equal opportunity for a high school education for boys and girls, I mean equal with those of the county seat, then we will hold a large number of boys and girls who will never drift toward our cities. (Applause.)

I have already quoted statistics to show you the tendency, and I am glad we are waking up to the fact that we must spend more money—I am going to strike right from the shoulder—spend more money and equip the township high schools equally as well as the county seat high schools. We can't get anything that is worth while unless we pay money for it. Why do I talk that way? Because the official report shows that in the rural school the levy for the rural schools is seven and twenty-six hundredths mills, and in the cities it is ten and twenty-eight hundredths, a difference of three mills. We are not spending by three mills on the dollar as much in the township schools as we are in the town and city schools. We must wake up, and I am glad we are waking up.

What are other states that are our neighbors doing upon this subject? There is an awakening along the line of agricultural education, but we do not just know what to do, and the important question is how to solve this problem. Not only the farmers of Ohio, the leading farmers of Ohio, are awakening up on this subject. The Hon. Elmer E. Brown, the National Commissioner of Education, recently said: "Two of the most important problems in American education at the present center in our rural schools"—so you see this thought is nation wide—"these are the problems of the adjustment of the school to the industrial life of the community. That means the readjustment of the courses of study in our schools to agriculture, and in the cities to the trades; and second, the problem of a more adequate school supervision." He goes on to show that it is an exceedingly difficult problem to readjust the schools, an exceedingly difficult problem to redirect the rural schools, modifying their courses of study and equipping them to do agricultural work that will count for something, that will be of real value, and I think we all realize the fact. How are other states trying to solve this problem? I have here before me an article written by the Hon. A. C. True, director of the office of the Experiment Station, Washington, D. C., which was read in the state of Oregon at a great meeting, national in its importance, upon the subject of agriculture. He says that twelve years ago, when Secretary Wilson came to the United States Department of Agriculture, there were but four agricultural high schools in the United States. When I say agricultural high schools, I mean a high school distinctively devoted to agriculture. He says there are now sixty—that means some progress. Then there were no high schools that had agricultural departments; now there are three hundred and twenty-four public high schools teaching agriculture, not distinctly agriculture, but they have agricultural departments. He goes on to say there were but few normal schools; now there are one hundred normal schools in the United States which have a strongly equipped department of agriculture for the preparation of teachers, to teach agriculture in an effective, practical way, so that there has been some progress made. May I stop long enough to say right here that one of the practical ways in which you people can promote this cause of the establishment of schools that will train teachers to teach intelligently and effectively

the subject of agriculture, will be for you to support a bill to be introduced in this session of the legislature. You remember seven years ago the state of Ohio was committed to a system of state normal colleges. At that time there were two established, one at Athens and one at Oxford. They have been established and have been running seven years, and they have been doing a splendid work. The law was weak in that it did not include an agricultural department, but the Oxford college three years ago introduced such a department, and is working it out. I presume the other college will do so, of it has not already done so. Two or three years ago a teachers' college was established here at the university. About four years ago the people from northern Ohio, helping to support those schools and finding it was too far to cross a state two hundred and twenty-five miles wide, began to ask for two normal schools, one for northwestern Ohio and one for northeastern Ohio. The senate has passed the bill twice, but in the lower house the bill has died. It will be reintroduced by a leading farmer. I want to describe a clause that is written in it, a clause that was not in it last year or the year before. In speaking of the boards of trustees that shall manage these two state normal schools, it is stated that "in planning the buildings, the trustees shall plan a strongly equipped department for the teaching of agriculture to prepare teachers to do the work in our public schools," and I am quite sure that your support of that bill would be very helpful. That bill would give us two centers, one for the northeast and one for the northwest. So you people in the southern part of the state cannot kick about it when we people from the north ask for two. "Well equipped for work in agriculture;" that is written in the bill. I hope you people will get hold of that bill and give it your support.

To show you what other states have done, there are two methods that have been adopted to give us schools that will train teachers upon this subject of agriculture. There is no use talking, ladies and gentlemen, without trained teachers the introduction into our rural schools will prove a failure, and I can prove it. I wish we might reach an agreement upon that subject. There are people who say: "Let us pass a law which will require teachers to be examined in agriculture as they are in other subjects." Other people say: "Let us pass a law to place agriculture in the course of study." Six years ago the National Educational Association, the greatest educational organization in the world, appointed a committee upon the subject of agriculture in our rural schools. That committee, after spending two years, going to France and Canada and traveling over the United States, a committee of high authority, after giving two years of investigation, came back and reported that the subject of agriculture in France and Canada and this country, wherever tried without trained teachers, proved a failure, and they recommended that no attempt should be made to introduce agriculture unless there was provision made for the training of teachers to teach it effectively and scientifically. That is why we have these schools. In accordance with the conclusion reached by that great committee, this is what has been done: In Alabama, Georgia, California, Minnesota, Oklahoma, Arkansas, New York, they have established what is called Congressional District Agricultural Schools. Nine such schools are now in Alabama, eleven in Georgia, a number in California, a number in Minnesota. These states say: "We will appropriate five or ten thousand dollars to each congressional district which will put up five or ten thousand dollars." The congressional district is to put up the buildings, but the state pays half the running expenses. There are seven states which are doing this.

You will find Wisconsin in 1902 originating the county agricultural school, not the congressional district, the county agricultural school. Please remember that in Wisconsin they have a great state university, and a college of agricul-

ture, one of the greatest universities of the middle west, yet with the college of agriculture and their experiment station they found that in order to make a success of it, they must establish county agricultural schools. The same is true in Michigan, in Maryland and Mississippi. The state of Wisconsin said to the counties: "We will give you four thousand dollars to maintain a county agricultural school if the county will give four thousand dollars, the county to erect the buildings." And in Wisconsin they have already erected five. That is the Michigan plan, and the Wisconsin plan.

It was my good fortune six weeks ago to spend a day in the Dun County Agricultural School. At the head of it was a graduate of one of our best agricultural schools of the middle west. He had two or three assistants. There were eighty young people there, the girls taking domestic science and the boys agriculture. I was surprised to find there were eighty people from that county who were getting ready to go back to the farm. They were living in the country and coming in; they were not living in town. The head of that county normal school said to me that their plan in Wisconsin is not to put agriculture in the schools, but to put the schools into agriculture. We haven't developed any plan in Ohio. We are lagging a little behind. Here are two plans, congressional district and county plan. Perhaps in Ohio the congressional district plan would be a splendid plan. That would mean twenty-one of such agricultural centers. Let me tell you what we are doing in Ohio: We have done something. In the Miami valley they have more good township superintendents to the square acre than any place in Ohio. It is a favorite spot in many respects. In a few townships in this valley they are working out this problem of agriculture. Let me tell you what we are trying to do in old Union township, Hancock county, eleven miles west of Findlay, my native township. I like to speak of it. We went before the people of that township last summer—we have an active, wideawake board of education who wanted a first-class high school building—they were maintaining a third-rate high school. They concluded they would abandon it altogether and ask the people for eighteen thousand dollars—we went before the people and asked for eighteen thousand dollars. I will tell you what we promised them in the campaign—that if they would vote eighteen thousand dollars for our township high school located at Mt. Cory, we would establish a first grade high school, and we would equip a large department or fit up a large room for the teaching of agriculture, have a laboratory well fitted for the subject of agriculture where they could study rotation of crops, horticulture, different kinds of soil, and all those subjects; and the people voted the money. The board is going to make good its promise in that building. We are going to have the high school ready by the 1st of October. That is an experiment, but I know it is along the right line. It is being tried in Michigan, and the conditions here are the same as in Michigan, and what will work out in Michigan and Wisconsin will work out for us here, the conditions are so near alike. We promised them something else. We promised them that not only the boys and girls would have an opportunity for an agricultural course, the girls domestic science, but we promised them that during January, February and March, perhaps in December, the young farmers could come to school there and devote some time. We would make that an agricultural center. We promised them a good deal, and we are going to realize everything we promised. We promised them there would be a library room, that there would be a depository of good literature published by the Experiment Station at Wooster, and of the United States, and of the Ohio State University. We are paying the freight and we are not getting very much good out of it. We will make this a center of good agricultural literature, distribute it, call the people in, wake up the farmers, and have them get more out of these schools, and out of these splen-

did bulletins sent out. We promised them magazines and papers on scientific agriculture. We are going to make everything good. We have the money, and when we get it done, we hope you will come up to visit us. We have a board of education which is going to work it out and make good every promise made to the people.

I want to go back to my first proposition. We can never make a success of it in any large sense unless we have teachers trained in agriculture as we have teachers now trained in music, and in drawing, and in other subjects. We are asking too much when we are asking teachers to teach subjects in which they are not qualified. We must have these centers, rural centers; we must develop the rural spirit, and show our boys and girls that they can make rural life just as enjoyable and profitable as the city life. One of the greatest dangers of this country today is this migration of the boys and girls to the cities. Just this fall Secretary Wilson wondered why New York was importing eight million bushels of potatoes with all her farms; and he went and hired an automobile and went out in the country and ran over those farms that had been deserted, and came back with the statement that those farms ought to be rehabilitated, and that New York could raise more potatoes than she needed. There was no need of New York importing potatoes. I hope you will take hold of this problem and do something practical. What we want to do today is to think out this problem, and not keep thinking all the time, but acting along the lines we feel are the right lines, and this township high school is trying to work it out—and there are some other townships that are working it out on the right line. We think we are going to work it out on a higher plan, because we have ample money in order to equip this building well.

Let me say, in concluding this discussion, that I have fully resolved, even before taking my office, for I have always lived in Ohio, and I think I know the needs and wants of the schools—I have fully resolved that three-fourths of all my time and energy of that office is going to be given to the improvement of rural and village schools of Ohio. (Applause.) The cities don't need my office. We have splendid city schools; they rank with the best in all this middle west, and if I can get a response from you people, if I can have you join me in this effort along these lines, namely, that of improving our schools by making provisions for the training of teachers, not only along the line of agriculture, but every other line. And if you join my efforts in the attempt to organize the forces in our rural and village schools, so that we can federate and ally them and accomplish more, join me in the effort that the office will make in order to get these two additional normal schools, with well equipped department for the teaching of agriculture, thus preparing our teachers for this work. If you will join us in this, I want to say to you I will give not only three-fourths but all of my time in the next year or two for the improvement of our rural schools.

I wish, Mr. President, that if your body sees fit, that they would appoint a committee to act with the office at any time to take up this subject.

#### Discussion.

A Member: I would like to ask a question. Do I understand that your plan means to centralize the township schools and do away with and have central high schools, and have all the pupils transported to these central schools?

Mr. Zeller: I am in favor of centralization where conditions are proper. If the families are too large the transportation will cost too much. (Applause.) Let me say this, I am in favor of centralization

and consolidation where the conditions are favorable, but I want to call your attention to the fact that for the last two years centralization has made but little progress.

It is eleven years old now, and today there are not more than 10% of our boys and girls in these schools, more than a quarter million of boys and girls are still in the sub-districts, and centralization is at a standstill now. I think I can find fifty townships where it would pay to centralize, but they are not centralized for lack of leadership. I believe in centralization where conditions are favorable.

Mr. Shirer, of Montgomery County: Under the present social conditions isn't it as necessary to teach agriculture in the city schools as in the rural schools?

Mr. Zeller: The only trouble is that when you center your agricultural schools in the city, you are taking your boys and girls away from the farm and the danger is they will lose the rural spirit.

Mr. Shirer: That is not the point. I don't mean to move the agricultural schools to the city, but I want to see the time when the city boys and girls are prepared to go out in the country to farm.

Mr. Zeller: I agree with you, but I don't want the boys from the townships hauled to the city and live there four years.

Mr. Shirer: No, no.

Mr. Zeller: You and I agree that the best place under the stars to raise a boy is on the farm, located in an intelligent community with good schools.

Mr. Cox: Our boys from all over the country want to get out into the country, people brought up right in the cities. I receive letters from them; they want to come out and learn how to work on the farm. Even college students want to get out and learn how. Some from this university. They want the actual practice, and I see the day coming when we will have to teach more agriculture.

Mr. Wilson of Madison: The most vital subject of our country has always been agriculture. It is a conservation of our soil and keeping it up that brings it on, and until we teach the young men in the country chemistry and agriculture, we are not going to do a bit of good, and I think that that movement should be carried to the city and the city boy also should be taught agriculture. Of course he has the opportunity to go to college and then come back to the country. He makes a good farmer everywhere you find him if he has any sense. The centralization of the pupils in the townships before they pass a certain grade is a failure. I don't say they cannot be taught better in a bunch, but the physical proposition to get them there; until they pass a certain grade, they should not be centralized in the township schools.

Conner of Franklin County: Without any intention of getting away from the subject, I would like to say that we must not forget the necessity for getting teachers equipped to do this work. As a person

who is somewhat educated along this line of agriculture, I can see how easy it will be for a person who has just a smattering of agricultural education, might do things that are a great deal worse than anything at all. While I do not want to throw any cold water on the normal schools in the northwestern part of the state, I do believe we can do it more economically by preparing people to teach agriculture in the great state university where they already have good, sufficient equipment to do that as it ought to be, and one of the reasons why the ordinary college is not able to do this because of the expensive equipment that is necessary to have if you are going to teach agriculture right, and I can't see how it is possible for a person to learn to teach agriculture right unless he had it taught to him. In travelling I have had considerable opportunity along that line to see you cannot do it by small means. I am very sure there is not any college in this state or a university in the state can do that—that is anywhere nearly equipped to do that as nearly as it ought to be done as the Ohio State University.

Mr. Zellers: I cannot agree with you at all, that we want great centers and that here we will train the teachers. There is no greater university than Ann Arbor, than Madison, Wisconsin, and there they found if they wanted to wake up the people, they had to take the opportunity to the very doors of the people. If Michigan, right here, a neighboring state, and Wisconsin, found that with one great state university it was necessary to establish these centers and then these county centers, it is useless to try the experiment, when these two neighboring states have already demonstrated that these other branches and these other schools are necessary.

Mr. ————— of Belmont County: We have 23 school buildings. It cannot be done in our township. We farm both sides of our county; and to get a half a mile we go three miles. I have four years to serve, and I came down to this one to consider agricultural education, I want some information. How are we going to get it? We have nobody to teach us. We think next year we are going to offer some premiums. These examiners say you can't do that. We pay our teachers \$2.00 to attend the institute once in each month, the examiners say, "You can't pay these teachers, it is a part of their work." If they want to kick us out of office it is all right. We have nobody down there to teach it. If the state of Ohio will give us normal schools to train the teachers, I don't care if it costs half a million dollars, I say let them do it.

Mr. Conner: In answer to the man's statement, I don't want to say anything about the county schools or anything against them, as I understand these schools are not for the purpose of teaching teachers. and I had only reference to teaching teachers. When you come to teaching teachers, good gracious, have them taught right. Our teachers need training and better training than they have. You cannot teach agriculture without equipment and you cannot teach agriculture without

costly equipment. I think the Ohio State University, already equipped, can do this very much cheaper than can be done by the smaller schools.

Mr. Zeller: If the deductions reached by this committee to which I alluded after two years, are worth anything, you can not make a success of it unless you have at least a superintendent who is somewhat educated along that line. You can make a beginning. There are kindergarten steps, you know, and primary steps, but you cannot hope to do anything great unless your superintendent is well up in agriculture and will go from school to school and teach it. I don't want to discourage you. You can do some things. There must be a kindergarten stage in agriculture as well as anything else, but you can't do anything great until you have teachers well trained, and I tell you one institution, however well equipped, cannot train sufficient teachers that will be called for in Ohio in the next five years. I repeat it, this is the place for leadership. If I lived in Belmont County I would never leave this place without asking the trustees of the Ohio University at Athens to add a strong and well equipped department of agriculture, and you have a right to do it.

Spencer, of Trumbull: If we wait for the teachers of Ohio to be educated in the Ohio State University before we have teachers of agriculture we will wait a good long time. We have centralized schools in Trumbull County, and we believe if we had teachers that were capable of handling the schools in agriculture as they are capable of handling the other branches, then we would be successful in our agricultural work. There the children are and the situation is just right for this work, if we only had the teachers; but that is just what we are lacking. I think if we can do anything to bring about the education of our teachers, there will be no further trouble.

Mr. Zeller: There are 150 of those schools in Ohio, and there you have the advantage, and we need 150 teachers right now for next year.

Cunningham: I was very sorry indeed I did not get in in time to hear the address on the subject. I don't know what the speakers said, but I have thought a good deal about this subject and have read some, and it seems to me, as Mr. Zeller said, that we must realize we must pass through the kindergarten stage; before we can reach the high point, we must pass through the intermediate point. Therefore we cannot expect to teach agriculture as a distinct feature in the beginning. I think if our primary the three R's, will deal with these subjects, we can make those studies apply to what we see every day until we are ready for the finished subject. For instance, the matter of arithmetic, instead of having our problems from fields with which we are not intimately connected, if these problems could be brought closer home, problems of every day life, and treating of farm operation, they would gradually develop, our teachers would develop. They are developing faster than the pupils. I think that is a very important thing, to make our other

subjects apply to the subject of agriculture. I am almost convinced it would be a mistake to begin to teach agriculture even in an elementary way at first. Let us begin gradually, our growth will be sure then. I know it is being taken up in many places. And in two schools the arithmetics and readers deal with those subjects along elementary lines, and gradually the mind of the child will get hold of this in a different way. I think it is the place to begin.

Shirer: I always thought it would be a good idea if the leaders in this work would give us a program of what they want studied in the rural schools. That's what we want to know, that's what the people want to know, what branches they want to study.

Mr. Ensign: I only know of one agricultural school. A little ways from my home they have an agricultural school, and it is certainly a success, a wonderful success. I am not very well acquainted with the students of the school. I know the teachers well. I know there is no school in Greene County, probably not even a high school, that has taken the interest—from the little tots clear up to the older ones—and gone forward in their other studies. The first thought that came to me was, when they were talking of making an agricultural school out of the township school, that it would detract from the other studies. They tell me it is an incentive to the other studies. They pass their grades, they are so interested in the school. They have little plots of ground and the teacher is up to his business, and he understand those things, and is an enthusiast in this matter. I came from northern Ohio into southern Ohio from the centralized portion of Ohio, and I wonder if this was brought about how we are going to pay it. The law specified how much we can use for school purposes. In the centralized portions of the state, we are to the limit and then some; now there must be some other legislation along that line. We have run our taxes from \$1 up to \$1.65. There must be some legislation along that line, we are running the tax up higher; we have got to come to it from one way or another. We can't have these high priced teachers; yet it must be the high priced teachers or none. We want the good ones, we want the ones who know how, those who can tell how. We don't want any half way teachers about it. There must be more taxes raised if it is to the limit.

Chairman: It is said of every \$3 we levy for taxes, \$2 goes for the support of the navy and army and the other one goes for all other purposes. The question then resolves itself, "Shall we shoot brains into our people, or shoot them out?" I want to discuss the question of assisting the commissioner's department along this line. What do you think?

Cline, of Putnam: It would be well to first get the question before the house, Mr. Chairman, and I move you to appoint a committee of three to assist the commissioner and then discuss it.

Chairman: You have heard the motion.



(Motion seconded. Carried.)

Mr. Blackford: Since our commissioner has asked for that, I think it needs no discussion. If the commissioner wants it, it is the business of the president to appoint the committee to work with the commissioner along the lines he has indicated.

(Motion carried.)

And thereupon the president appointed the following committee:

T. C. Laylin, Master of Ohio State Grange.  
J. F. Cunningham, Editor Ohio Farmer.  
Prof. A. B. Graham, of Experiment Station.

Music by the Angelus Quartette. (Applause.)

The Chairman: Now the State Board in arranging this program was not satisfied with anything less than the very best talent that could be secured, and were able to secure a gentleman away from the East, from Massachusetts, who will now speak to us, Mr. H. D. Hemenway, who is general secretary of ..... Institute of that place.

#### THE SHADE TREE.

By H. D. Hemenway, Northampton, Mass.

Mr. President, Ladies and Gentlemen:—It gives me pleasure to be here. I have been much interested in the subject just discussed, especially so as I have had the pleasure of teaching both children and teachers and preachers in agriculture, and while teaching in the city I found that three of those boys and girls who had taken the subject went back to the farm from the city.

In discussing the subject this afternoon, I would like to have you feel at perfect liberty to ask of me any question you wish. The shade tree, of course, is one of the great subjects of the country, and I shall treat it more from the standpoint of its care and preservation, both in the setting and the care of the tree, rather than from the different kinds of shade trees. Of course, the different kind of trees that we may have for our streets, either for the rural community or the city, depends largely upon the taste of the individual of those living in the communities or upon the condition of the soil or other things, usually upon the condition of the soil or upon the tastes of the people. We often have the button ball, a tree which grows very rapidly, that, and the cottonwood are perhaps among those that grow the most rapidly; then we have those trees that mostly grow in very wet soils, like the willow.

(Slide.) This is the buttonball, which grows very rapidly; this, and the cottonwood.

A Member: What country are these trees native of?

Mr. Hemenway: They are native of the United States. I shall not introduce any trees that are not native, probably as most of our native trees are of sufficient value to be used, probably as good as any introduced. This tree is one that grows the highest, and one of the largest, and one of the most rapid growing.

A Member: To what class does it belong?

Mr. Hemenway: It is a sycamore tree or buttonball. The true sycamore is an English tree. This simply shows the tree with its foliage, growing abun-

dantly here; and then the white ash is a tree that can be used along the roadside, something that grows rapidly and can be used in damp places; a pretty tree in summer and not very much troubled with insects.

(Slide.) Of course, this tree is perhaps one of three trees that has been used most—American elm, white elm—and yet I think it is a tree that is not the best, because it is troubled now in many sections of the country with the elm leaf beetle and requires a great deal of care, and also there is a great tendency to split.

A Member: How do you account for that elm leaf beetle?

Mr. Hemenway: The elm leaf beetle is introduced from England or from the continent, and is only destroyed by the use of arsenic, so it is necessary in many parts of the East to spray continually in order to prevent these trees from being killed.

(Slide.) Perhaps one of the best trees we have is the maple. The rock maple is very seldom troubled with any disease. It grows a little more slowly than many of the others. The blossoms are quite pretty after the leaves come out in the spring. It makes a very pretty tree all the summer, a shade tree which can be planted about thirty feet apart, and makes a very pretty avenue wherever planted.

The red maple can also be used, growing a little more rapidly, and can be used in with the rock maple. Those who have never noticed the two together should take special notice the next time they have an opportunity to see the red and the rock maples together; the foliage is very beautiful in the fall, the red maple taking on the brilliant red, while the rock maple takes on both red and yellow intermingling.

The white maple is a rapid growing tree and takes on a yellow foliage.

This is a part of the subject I wish to specially call your attention to, and that is in setting the tree and in the care of the tree itself, rather than presenting any special tree, because the trees that we have are ones we must take care of. The contract for setting out the trees too many times is let to someone who will set the trees the cheapest, and digs a little bit of a hole and crowds the roots into it with his foot, crowding the soil in around it, leaving a little bit of space for the air, and the tree starts in the spring; any tree will start if it is wintered well if it has any soil or not if it has plenty of moisture. If he only went to the trouble to dig a large hole broad enough for the roots to be well spread out, and crowding fine soil in around the roots sufficiently, this tree would grow in three years three times larger than the one here (slide), and ninety-five per cent. would live, and perhaps forty, fifty or sixty of those trees live, and the growth is very small. It would pay them to take more time, to pay more attention to setting them out and to pay more attention and half the money by having the tree started right.

A Member: Would you make a mud mortar and dampen the roots before you set it or set it in dry ground?

Mr. Hemenway: If it is planted early enough the soil is usually wet enough. The thing is to set the tree and have good soil around the roots; there is such a thing of making it too wet and puddling it if your soil is clay. If it is sandy or sandy loam, there is no such thing as making it too wet. A person who has never seen trees set in heavy clay, might take me to task for saying it might be too wet.

A Member: Would you use fertilizer of any kind in setting the trees?

Mr. Hemenway: In setting the tree use fertilizer only after the roots are covered.

A Member: What do you use? Fertilizer or manure?

Mr. Hemenway: Manure is probably the best. Any fertilizer or food is taken into the roots through the tiny root hairs at the end of the feeding roots, and this is absolutely by osmosis, and must be in a more diluted fluid than the protoplasm, within the cells of the roots, and it is taken in in very minute quantities, and it is taken in from the soil grains. It is the soil moisture, which is a thin film of moisture surrounding each soil grain, and that is the moisture that is taken in and which contains the plant food. Standing water in the soil is of very little or no value to the plant in growth, either a tree or any other plant. It must be taken in by the root hairs from the soil film surrounding each particle of soil, and that thickness varies according to the amount of moisture in the soil and also according to the distance above the standing water, hydraulic water from the soil.

(Slide.) When the tree is well planted we have very many times, as it comes from the nursery or as we dig it from the woods, trees of this character (on the slide) with a troublesome crotch, or where the top is divided. Too many times we leave that as it is. It is dangerous, not only for the body of the tree in the future, but for the safety of the people as well. This tree should be trimmed and should be cut off like that, just as close as possible, leaving one side here. If there are several heads there is less danger than with just two. There should be no troublesome place where there is danger of splitting down, which will take place when the tree grows older. It may not take place for sixty years, but some time there will be trouble; perhaps not for the tree alone, but for some one in the community. Only within the last five years in the city from which I came, two trees of this character broke, one killing a horse, the man and express wagon just escaping; another broke down a good many wires and still another man just barely escaped, the tree coming down directly on the sidewalk just as he had passed. It is a matter of safety. Then as the tree grows a little larger it is well to cut off the ends of the brushes and cut out branches that intermingle; that is, that cross each other to make it injurious.

A Member: What time of the year do you cut them off?

Mr. Hemenway: The best time is near the close of the dormant period. The tree will heal quickest at that time. If cut in the fall the drying winds of the winter will dry them out.

A Member: If it is a variety that would send out a number of shoots where it is cut off; what then?

Mr. Hemenway: The general rule is toward the end of the dormant period, but as a matter of fact it is better during the summer than during the early winter for most trees, but however do not prune just before the leaves come out. If the pruning is done it should be done in March, otherwise you get a great deal of bleeding, but if you wait until the leaves are out the bleeding is not very great.

A Member: Evergreen?

Mr. Hemenway: Evergreen can be pruned at any time.

A Member: Do you treat those wounds any?

Mr. Hemenway: The best way is to cover them with something to keep out the weather, either a band or a grafting wax or something of that kind. It should be banded immediately to keep the water out, and should be cut off just as close as possible. I think that will be brought out a little later.

(Slide.) This shows a tree that has been set out and allowed to grow for ten years. The tree was exactly the same as this one (another picture). Every year this gradually increases, and some day it is going to come down, one side or the other.

A Member: Can't that be helped by boarding it up?

Mr. Hemenway: Yes. When the tree is set and has become as large as this we find too much opposition for the tree warden to make it advisable to cut one side off; although a tree up to that size it might be best for the tree to cut off one side, but anything larger than this it is better to treat it some way. In that case a bolt should be passed through here so as to keep it perfectly tight, and then about ten feet above this a bolt with an eye and a cable chain. Originally they used to put bolts right through, and when the wind blows you get it so twisted that in time the bolt will break and the tree will fall anyway, but with a cable chain with a bolt put in about ten feet above this place here, you will find that by countersinking the head so it will heal over, you will find by boring a larger hole and countersinking the head of the bolt it grows over in about three years, while if the bolt sticks a long way out each side it takes a longer time to heal over; then by using a cable chain it makes a perfect protection, usually a half-inch steel chain, that makes a much more effective method than by using a bolt.

(Slide.) Here is another tree; same trouble. Sometimes there is still another method which can be used. This is meant to show something of the danger of a tree like this to the community when it is not properly protected and cared for. It becomes a serious problem, one we don't often think of until a great deal of harm is done. Even if the tree falls and breaks down several wires, it means that the telephone company or street car company have to spend ten or fifteen dollars apiece and the city as much more to clean up the debris. A dozen men with a team, or one or more teams. It doesn't take very long until it counts up to quite a sum.

(Slide.) This tree, showing another trouble, at some time had been cut off and a growth started up and allowed to grow. There was an attempt to protect this tree. You will notice up above this point that there is a wire across; that is, a cable rope that is wound around each side of the trunk of the two trunks. Now the method employed in protecting that tree is going to kill the tree. It is not going to be very much longer before that top is entirely killed, because the plant food while taken in in its raw state by the roots is carried up to the leaves and there digested, and is then sent to all parts of the plant and of the tree, and carried back in the bark and through the cambium layer back through the inner bark, and that is girdling those trunks so that it is a matter of only a short time before this is entirely killed.

(Slide.) This shows it still better. This wire—and by looking close you will see it has cut in very deep—and unless that is protected, within a year or two the top will be very seriously injured and killed.

(Slide.) This is a natural method of protecting a tree. Take this branch: it would split down almost as soon as we get a very heavy storm, especially with ice, were it not for this natural graft. Many times a natural graft may be made, or an artificial graft may be made by joining the two together, the two branches, or allowing a twig from one to run up to another and by tying until it can graft until a union can take place. In that way no more is necessary, but that will solve the problem.

Now to return to the method of pruning. (Slide.) This was a method that was used universally a few years ago and in practice today in a good many localities, and the results as you see here: this branch was cut off and here are others. This one was cut off right, and you see it is healed over; in two years more that will be entirely covered over. When a cut has to be made it should be made just as near the trunk as possible, so that the cambium layer will send out and the cut will heal over, and the layer will be covered over the cut, especially if it is protected from the weather. (Another picture.) You see this tree? To heal this

wound over the stub was probably left way out here; they believed in leaving stub, and it began to decay, and it decayed clear back to the trunk until we have a hollow trunk, and now it is impossible for nature to heal that over.

A Member: How do you protect that from decaying in there?

Mr. Hemenway: The only method to pursue in that when it has reached this stage is to clean it out and treat it as a dentist treats a tooth; clean it out thoroughly with chisels and instruments made for that purpose.

A Member: If it were a limb growing on the tree and you want to cut the branch off? There is a fresh wound there?

Mr. Hemenway: Cut it off just as close to the trunk as possible, right straight down, even back into the wood of the trunk as far as you can. It will heal over. If it is protected it will heal over very soon.

A Member: Will it decay?

Mr. Hemenway: No, it will usually heal over without decay in three to five years. You can only see the scar unless the branch is very large. Of course, the time to do the pruning is when the branches are small, but the branch of that size could be cut off properly clear back and no danger of decay.

A Member: Are we to understand that a branch that large would eventually heal over?

Mr. Hemenway: A branch that is not too large.

A Member: I mean as large as represented there?

Mr. Hemenway: A branch as large as that would heal over.

A Member: As a general thing, is it safe to cut a branch that is more than six inches in diameter?

Mr. Hemenway: It should be cut back. It will heal over, but it is much better to cut them before they are six inches in diameter. If it is necessary to cut them, great care must be taken in preventing it drying out while healing is taking place. Healing can be induced by cutting out after the first year; hacking this ring (indicating) as it grows will encourage its growing more rapidly, cutting it with a sharp knife.

A Member: A six-inch branch ought to be protected after it is cut off?

Mr. Hemenway: Yes; and kept protected for several years, if you wish it to heal. It depends a great deal upon the vitality of the tree. A cut of six inches probably would heal in five years with some, and some might never. It depends a good deal upon the vitality, not necessarily upon the age, although to some extent.

(Slide.) Here is another method of protecting the trees where they stand on a corner. Too many trees are injured by wheels barking them, and this, of course, tends to girdle and partly girdle the tree, and every bit of bark taken off the trunk of the tree is a blow dealt toward the life of the tree.

(Slide.) This shows another method, where a blacksmith tried to protect a tree. This was a very valuable apple tree. He told me it bore seventeen barrels of apples and had several times won a premium, and was in danger of splitting down. It had been pruned first, the same as the others had, and it had decayed clear into the trunk; was almost hollow. Instead of running bolts through, we simply run wide bands around these branches. Some of these bands are from two to three inches in width; even narrower ones would have been better, even though they cut in. These are so wide that girdling is almost certain to take place. It has almost. He told me he was very much afraid it would die. It is being girdled just as effectively as if an axe had shaved the bark off, preventing the food supply going down to the roots, starving the tree to death. The very remedy he applied is one that is going to kill the tree.

A Member: How would it do to put a board next to the bark there?

Mr. Hemenway: The best way would be to bore a hole right through there and countersink this head right into the wood, so that it could have been cut two inches across, and then by connecting from this eye here to an eye in the other branch, connecting the two with a cable chain, half-inch steel chain, that would have allowed plenty of swing for the tree in case of a severe wind storm. It would also have been well for a tree that has reached this stage to put a bolt right through here.

A Member: Could that band be taken off now and put the bolt in and save the tree?

Mr. Hemenway: It probably could, although it has been there several years. That band could be removed and probably it would grow out of it, but the tree probably would not bear as well again, because it has suffered so much. This does not show up the entire. This bulges out, the cambium layer has grown out. The growth of all exogenous trees takes place just within the cambium layer, and it does very little harm to put a bolt through the tree. The inside, or the wood tissue of the tree, or any plant, is to support the tree and bring its leaves up into the light and air and sunshine, and the injury to that is of very much less consequence than the injury to the inner bark.

A Member: Is there not danger of moisture gathering around that bolt and causing decay of the center part of that limb?

Mr. Hemenway: Not if it is properly put in. The bolt could be put in and made watertight by the use of oakum and gum, principally by the use of oakum, and pounded in until it is perfectly tight and sheds water. It would if the hole was larger so that the water could pass in, be dangerous, but that must be tight, so as to prevent any moisture getting in.

A Member: Now if you would clean that out in the boss of that tree and fill it up with cement, would that prevent further rotting?

Mr. Hemmenway: Yes, that can be treated as a dentist treats a tooth, cutting out this and cleaning that out, probably a barrel of material in that and more than that, then fill up with cement, probably of one, three and five would do.

(Slide.) This shows how a tree is being cleaned out for putting in cement. That is the method we must pursue in protecting a tree when it becomes hollow. When decay has passed back into the trunk; the only remedy for a tree is to dig it out thoroughly and fill it up with cement, then the tree will grow over. We have several that have grown over an area as wide as that, covered up entirely. We have several tons of cement. We have one tree with five tons of cement in it, apparently in a prosperous condition.

A Member: What do you mean by cement one, three and five.

Mr. Hemenway: Has that proportion. That is the proportion that is used in making foundations: one part cement, three of sand, five of broken stone for the inside; or you can use one of cement and four of sand, and the outer portion should be about one to two, just the finishing layer over the surface. Many cover that with a zinc, but that is not necessary. The cambium layer grows a little faster over a zinc layer than cement, but tin I should advise against.

(Slide.) Here is a tree that is being treated. This scaffold was made so as to clean out these places, and they have already been treated with coal tar solution so as to make them perfectly tight, and air and water tight inside, and they are ready now for the cement; and in some cases where the cavities are very large, iron braces are put in to help keep the cement in place. That tree is one that is being treated by the students of Amherst college.

(Slide.) This shows another tree that has been treated and that is covered. Tin is not necessary and will rust away in time; and it does not add very much to the tree except expense.

(Slide.) This shows a tree that has been entirely treated, well treated. This has been cut back and first cleaned out entirely, every bit, clear back, as a dentist would treat a tooth, being very careful that there is not a particle of decay left in the trunk, then treated with a coat of coal tar, then iron braces in a place where the cavity is as large as this, and then cement filled in and then the final one-to-two layer put on the surface, and these are covered over so that this cambium layer will grow over.

A Member: Fifteen years ago they feared they were going to lose the Washington Elm in Cambridge. Did they save the tree, or do you know?

Mr. Hemenway: No, it ought not; it is within the tree, so there is no give saved that were apparently about to die.

A Member: At such a height as that, won't the swinging of the wind crack the cement core?

Mr. Hemenway: No it ought not; it is within the tree, so there is no give in the cement itself, it is within the trunk. There is danger when decay has taken place so far and there is simply a thin shell, that the tree will collapse, but after the tree is treated and the cement is hard, it strengthens the tree usually sufficient to make it rigid.

(Slide.) This brings us to another method of looking after our shade trees, and one that is a very serious one in every community where we have electric lights, telephones and telegraphs and especially where wires go overhead. In too many places, in too many cities, the telegraph and telephone and electric light companies have the right of way, regardless of the tree, and too many times the tree butcher goes about butchering the trees, killing off and making unsightly trees which might be very sightly and a benefit to the community. Trees treated as this is being treated will never be what they should be.

(Slide.) This next shows you how it looks in a year or two; simply sends up a large number of branches which must be cut out more or less on account of the wires. Instead of being a tree of beauty it is an unsightly tree and will never be satisfactory as a shade tree.

A Member: Can't you compel the telephone companies to cover these wires and leave the trees whole?

Mr. Hemenway: In most states they can. Too many times they don't. Many times the telephone and telegraph companies have the right of way at the sacrifice of the tree; too many localities wake up too late to the fact that the trees are injured, perhaps ruined.

(Slide.) This shows you a tree that might have been beautiful, yet you see it is forever ruined; wires overhead, a great many of them there. Here is another tree which has been cut back and become unshapely and never can be brought into shape.

(Slide.) Here is another row of trees which are being butchered. The tree butcher cut off these stubs, and cutting them off too many times, leaving them in such a manner that decay must take place. If they are careful in covering the wires in operating, in observing the rules of pruning much less damage would be done. In some towns and cities the electric light and street railroad and telegraph and telephone companies have no right and are not allowed to make any cuts upon the trees, but must all be done by the tree warden, and in that case usually the trees are protected. These trees, you see, are beyond repair. They can be treated to some extent and saved for a time; they cannot be made perfect.

(Slide.) This shows where the trees can be protected. You will notice that they made the wires outside and left the trees comparatively nearly whole, and that can be done and the companies will do that if they have to. They will also put on a covered wire, which is a little more expensive. Of course, we need the telephone and telegraph companies, but we need to have them a little more in co-operation for the future welfare of our public streets, and many times they can if they are only brought to see the matter in the right light.

Another thing we have to treat our trees for is troublesome insects. You may not have it here, but sooner or later the elm leaf beetle will reach you, although a great effort is being made in the East to prevent its spread, and it may check it. If it is not it will be necessary in order to save them to spray them, and it is simply the different methods of spraying. It doesn't make much difference, the method or kind of pump—the hand pump or steam pump or bucket pump—but something must be done to save the trees, and these can be saved from almost any insect. The elm leaf beetle is the worst and probably the most troublesome in most localities to the shade tree. We have also other kinds of trees. Of course, the fruit trees, which most of us know must be treated to get the most perfect fruit.

(Slide.) This simply shows one of the methods of treating the trees for this troublesome insect. Of course, a great deal depends upon the shade trees in making the city beautiful and bringing out by the tree the beauty of the home and of the community; and we must have a certain setting; we must have a framework, and the trees in every community furnish the frame to the picture of any community. And it is time we make a special effort to protect the trees in such a manner as to make them grow and develop them and bring out the best possible frame for our cities and our homes.

I thank you for your attention.

A Member: I would like to ask whether you would recommend trying to perpetuate the life of the old trees or set our young trees?

Mr. Hemenway: It depends largely upon the tree. If we have a tree that has been growing twenty years, it will take us twenty years to get another tree up to that size, and if it can be protected for sixty or seventy years, it will pay to spend some money to protect it; but a tree that is old and could live but a few years anyway, unless it is of special value, it is better to put the money in young trees.

A Member: Isn't this matter of treating trees pretty expensive?

Mr. Hemenway: It depends on what we call expensive. It is expensive for the individual tree, but if you consider the time it takes, twenty, thirty or forty years to get a tree, it takes years to produce a tree that may in a few minutes be injured.

A Member: I know in our county seat we have been working at it for a year or two and we find it pretty expensive, I think.

Mr. Hemenway: It is expensive work, but some of the trees they have treated have proven of such advantage that it is worth while. And the simple method of beginning right and treating them right from the beginning up, wise methods that cost very little. It is remedying the defects that have been left for a lifetime that are expensive, whether in treating trees or anything else.

A Member: Do you have more trees damaged by the telegraph or telephone companies' wires than any other way?



Mr. Hemenway: Yes, probably it is now; and can be remedied very easily by using covered wires or putting wires under ground, but they are more expensive to the country; but the community should see that no trees are injured by the telegraph and telephone companies.

A Member: I don't think they have any right to cut them.

Mr. Hemenway: They haven't in many states.

A Member: I know they passed through my place. I required them to have covered wires along my house and they did it. I wouldn't give them the right of way.

Another Member: If you stand out about it you will get it every time.

A Member: What solution do you use in spraying forest trees?

Mr. Hemenway: I think acetate of lead is used as much as any; different localities use different solutions. Sometimes Paris green.

A Member: Is any superior to the other?

Mr. Hemenway: It is usually a question of price. Which is the cheaper. In some localities you are able to get one thing cheaper than another. Always use a little lime to correct the acid in spraying and arsenic to prevent leaf burning.

Mr. Blackford: It seems to me we have had one of the best lectures that has ever been given here and one far more reaching, if we could only consider it in its proper light. The hard lines in which our fathers found themselves in trimming off the forest were such that nearly all the native trees were trimmed away from the house. The timber moved away as far back as they can get. The time has come that the situation has all to be changed. I took a trip a short while ago into the next county, a trip of probably six miles, and I saw some of the most beautiful groves and trees in the yard I ever saw—cedars, pines, in a perfect state of preservation—trees that would be worth \$200, \$300, \$500. They would rather let the other man keep the \$500 than part with these trees. The proposition that comes to us is, are we going to get the trees we formerly did have when this country was primeval, and get them round about the house? Are we going to spend a few dollars for the beautification of our household? Are we going to grow potatoes and tobacco in our front yards? It seems to me that is a great commentary upon the people of Ohio, that they are not becoming as much interested in forests as they should be; they are not trying to beautify their premises. I know no sentiment can cluster around a home of that nature—a bare yard and bare ground and all that kind of thing, a bare home—it's utterly impossible. The only way we can make it a pleasure is to plant these trees, and make things beautiful around the home, so that it will appeal to the boys and girls that are being reared on that farm.

So I believe this lecture ought to stimulate the farmers all over the state of Ohio and ought to stimulate the lecturers; they ought to insist that something be done along these lines.

Mr. Stukey: I would like to ask, where we have very large maple trees where they become too large people go to work and cut the tops off like the telephone companies do. How can we control the growth?

Mr. Hemenway: I think you can control them. If you are there, you can make them put on covered wires.

Mr. Stukey: The point is the trees. People don't like them because they are too large and apt to break down, and if you do go to work and cut the tops all off it spoils the tree. How can we keep them from getting too large?

Mr. Hemenway: Plant trees that will never get too large; but it is difficult unless you remove the food supply. You can prune to a certain extent and keep the tree down in size. When your tree becomes somewhere near the proper size, use the same method as the Japanese do in grafting, one way by root pruning.

Mr. Spencer: At what age should trees be transplanted?

Mr. Hemenway: It costs more to transplant them when they are pretty good size. The best age to transplant trees and be successful is probably when the tree is under five years of age; trees not over two inches in diameter. I have seen trees a foot in diameter transplanted. I have seen trees transplanted that cost a thousand dollars to transplant, and the man was perfectly satisfied; said it made his place look one thousand dollars better.

A Member: Can't this tree business be overdone?

Mr. Hemenway: Anything can be overdone.

A Member: I have been planting trees all my life in this country, and I have sawed down some of the trees that I planted in my front yard to let sunlight in, in order to have flower beds and rose bushes, and still I have enough left. We can overdo this thing. I like to see a beautiful home. I think a nice home is the best thing on earth for a family, and I want some sunlight.

Mr. Hemenway: When trees are planted they should be set to bring out the best value; in the shade trees they should be set usually from thirty to sixty feet apart. That will allow air and sunshine to come in between. Sometimes trees are set ten to fifteen feet apart, and from a horticultural point this is a mistake. If you are setting trees for forestry, four, five and six feet apart, and that will pay. On land that was worth five dollars an acre in Massachusetts, thirty years ago, trees were set; at the end of thirty years they were cut off and netted one hundred and sixty dollars an acre. That shows the value from the forest standpoint, but that is different from the shade tree.

Mr. Cunningham: In a row of hard maple trees about thirty years old, I notice nearly every season, not every season, along the middle of the summer the leaves become dry and brown around the edge.

Mr. Hemenway: How close are the trees?

Mr. Cunningham: About, I should judge, between twenty and twenty-five feet apart, rather close.

Mr. Hemenway: They are too close, and it is probably a question of moisture. The maple tree is a surface feeder, and is affected by the supply of moisture in the soil, and especially if the trees are close. Anybody who has tried to grow anything under a maple tree knows it takes all the moisture out of the soil. It is due to a lack of moisture sufficient to keep the full leaves supplied with moisture. There may be something else causing your trouble, but this is probably the reason.

Mr. Cradler: It seems to me, and I want to ask a question in connection with what I have to say, that we ought to plant some other kind of tree than just these forest trees; for instance, a pecan tree or a cedar tree; some trees that are valuable for making posts in the future. I want to ask the professor if there is anything of that kind going on the East—the sale of these trees bearing nuts, such as chestnuts, pecans, such as good posts.

Mr. Hemenway: Some for posts, I think the catalpa or locust, then the cedar, and they are being planted to some extent. There is quite a movement on foot to plant nut trees, although I do not know of many places where they have been planted; but there are several improved varieties on the market which are being set, both chestnut and hickory and different kinds, but the catalpa is being planted mostly. The forestry bulletin out on that subject, I think, you will be interested in, which you can get by writing.

Mr. ———, of Guernsey: Referring to the electrocution of trees: I want to say we have grounded all the posts near our buildings and near our trees on our line, and we have never had a single tree affected by lightning since the line was built eight or ten years ago. I think we have effectually escaped this electrocution of trees.

The Chairman: Our committee appointed this morning to investigate some fertilizer question is now ready to report.

Mr. Laylin: We have done our duty as well as we can. Mr. Denman was out of his office on legal business, so he did not return until a few minutes ago. The analyses are still in the hands of Dr. Lord, and he is working to make a report upon them, and a copy will be furnished me tomorrow for public inspection. The question now occurs whether this committee ought to be continued. As there is a member of the agricultural board upon that committee it would be well for you perhaps to continue it. The only question before us that we have been discussing for some little time is the question of responsibility. If we publish that in the proceedings of this report or in the proceedings of the Grange, you understand certain things may be said by a newspaper and are not subject to libel proceedings, but other people have to be careful. I do not deem that it is essential that we should hurry this matter in the least, and after the report comes into my possession, or into the possession of the board, it will be open to inspection. A report that is perfectly straight and fair would have no trouble whatever, and that is the way we shall leave it.

A member then made a motion to continue the committee indefinitely until it is ready to make a report. Seconded. Carried.

The Chairman: This concludes our annual Farmers' Institute at the state capital. We trust we have done some things, that something may have been said or some ideas dropped that will enable us to do some better work upon our farms in the next year. The great problem of the farm is, how can we increase our product on the farms? It not only means money to us, but life to others as well. Let us go home from this meeting with a determination of doing better work next year. I am

satisfied. I have confidence in the ability of man to meet and solve the problems that come to us, and one is how to feed and clothe the people. I want to thank you in conclusion for your kind attention at every session. With this, we will dismiss you. The meeting is adjourned.

And thereupon at 4:50 o'clock p. m., the meeting adjourned.

**REPORT**  
**OF THE**  
**ANNUAL MEETING**  
**OF THE**  
**Ohio State**  
**Board of Agriculture**

**HELD IN THE**  
**Board of Trade Auditorium**

**IN THE**  
**CITY OF COLUMBUS**  
**Thursday, January 13,**

**1910**



PROCEEDINGS

OF THE

Sixty-Fourth Annual Meeting

OF THE

Ohio State Board of Agriculture

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The sixty-fourth annual meeting of the Ohio State Board of Agriculture was held on January 13, 1910, at the Board of Trade Auditorium, Columbus, under the presidency of Mr. L. W. Kilgore, London, Ohio; A. P. Sandles, Secretary, Ottawa, Ohio.

The meeting was called to order by President Kilgore, and after a vocal selection by the Angelus Quartette, Mr. Kilgore delivered the following address:

ADDRESS OF HON. L. W. KILGORE.

In Ohio a new era is coming. The beginning is here.

A new and mighty force is in the field.

Agriculture has suddenly become a giant.

Its virtues are being proclaimed by all captains of industry and finance.

The awakening has come. For generations the tiller of the soil was a bearer of burdens and drawer of water.

Today he is the uncrowned king of this Republic.

Today the world takes off its hat and pays tribute to the man who plows and farms the earth.

Today the Ohio State Board of Agriculture extends greetings to all who have come to participate in this day's business and enjoy its benefits.

We greet you and bid a royal welcome because you are workers and promoters in a common cause.

Today the Ohio State Board of Agriculture voices its congratulations to the people of this great commonwealth because it has aroused to the imperative need of better methods of agriculture and increased yield of crops.

The year just passed has been productive of intense interest in every phase of agriculture.

The railroad president and millionaire capitalist have become students in the art of producing and harvesting the golden fields of grain.

Those who enjoy a place and labor in the sphere of the arts, sciences and professions now pay homage to those who have meat and bread to sell.

It is time for the farmer to take more active interest in himself and his business.

Pursuant to statutory law you are called here today to discuss the problems which confront the farmer and his interest.

Not only this, but to learn also of the work of the Ohio State Board of Agriculture during the past year.

We are pleased to render unto you account of our stewardship.

The year has been a busy and growing one.

Every part of our work has grown beyond our dreams.

Our increased effort has been not altogether from our own inclination, but it has been coupled with that expressed desire of the farmers for greater and advanced labors in the field which the farming interests cover.

One year ago, at the beginning of my administration as president, the first thing to occupy our attention was the farmer institute work then in progress.

Eleven thousand dollars is the amount placed at the disposal of the board by law. This sum is not sufficient for the needs of the work.

Other states pay instructors better wages than are paid in Ohio. If we invite speakers outside of the state to do work in Ohio we are obliged to pay them more wages than we pay for home talent. Last year a greater sum than was allowed by law was needed for this work.

This year to keep within the sum permitted, and at the same time to pay living wages to our field men, we were obliged to assign one speaker instead of two at a number of meetings.

This is also done in other states.

Two ways were presented by which we could keep within our appropriation—either cut down the number of institutes or lessen the number of speakers.

The Ohio Experiment Station has rendered valuable assistance at a number of these meetings by sending their field men to give special lectures. The farmers have greatly appreciated this help also.

We are advised that in Kansas a recent legislature increased the funds available for institute work from \$10,500 to \$52,500.

We believe that our own legislature could do well to give this need in Ohio some consideration.

Ohio is such a splendid state and with so many diversified industries and resources as to demand and be worthy of the best attention in this line.



The qualifications of institute instructors should be increased.

They should be required to give themselves some special training and schooling for their work.

The state should offer sufficient inducements to bring about this result. They should go into the field with all necessary equipment—charts, maps, lanterns and other apparatus to make their work demonstrative and effective.

It is their business to make two blades of grass grow where only one grew before, and make one acre of corn produce more corn in 1910 than it did in 1909.

To encourage the producer is money well invested.

The profits will return the principal many fold.

### NURSERY AND ORCHARD DIVISION

The duties of the Division of Nursery and Orchard Inspection have this year grown out of all proportion to the funds and assistance provided.

Eight hundred and twenty-two nurseries were inspected.

This is double the number examined but four years ago.

Four hundred petitions were received for orchard inspection, and equals the combined number of requests for such work during the last four years.

Great progress has been made by the Division in awakening an interest in better care of home orchards.

The deplorable condition of family orchards throughout the state, and the scant supply of good fruit for family use should be remedied and great assistance is necessary to carry on this work successfully.

The Division deserves great credit for its prompt and careful work in preventing the establishment of the brown tail moth in Ohio. If it had not been for our inspection and treatment of imported stock this dangerous insect would have become a pest in no less than twenty different localities of the state. The loss thus averted cannot be estimated in dollars and cents, but it qualifies the expenditure of every dollar spent on this work since it became a part of the Ohio Department of Agriculture.

The greatest good resulting from our work is performed in preventing the introduction of dangerous pests rather than in trying to subdue them after they have become established, as was the case with San Jose scale. Ample funds are therefore necessary in order to capably handle such problems promptly.

The Board is to be congratulated on the splendid opportunities given this Division, through its secretary, to bring its work and benefits before the farmers of the state in many different ways. I might mention as some of these opportunities horticultural and agricultural trains, demonstrations at county infirmaries, exhibits at state and county fairs, addresses before farmers' institutes, farmers' clubs, high schools, etc. The publicity gained through these methods has reached thousands of farmers who had never before known of the assistance rendered by this Division.

Several publications have been issued by the Chief Inspector and are available for free distribution.

Prof. Norman E. Shaw, as Chief Inspector of this part of our work together with his able corps of assistants, have labored early and late and in all kinds of weather, in their efforts to meet the unprecedented demands made for inspection in this work.

The citizens of the state should not fail to note that the law provides for free inspection of trees for all who make proper application for it.

A law should be enacted giving this branch of our work the inspection of apiaries in Ohio.

The rapid decrease in the production of honey by many tons bears out this statement.

### DIVISION OF LIVE STOCK

Last year the Legislature appropriated \$18,000 for the conduct of our work for the suppression of dangerous and contagious disease among live stock.

Last year the state of Pennsylvania set aside \$353,000 for the same purpose. Ohio has four veterinarians employed. Illinois has forty-eight. The live stock interests in Ohio amount to more than two hundred million dollars.

The loss from preventable diseases is more than five million dollars annually. Other states have laws protecting the owners of live stock against the importation of diseased animals. Ohio has no such law, although one is sadly needed.

The work of this part of our Department has in the past year been of marvelous growth. In 1908 the total number of investigations made was 159. In the year 1909 the total number was 387, not including investigations for rabies, of which there were 132 outbreaks reported.

Dr. Paul Fischer, State Veterinarian, and his assistants, have been tireless and vigilant workers. With increased appropriations more work has been accomplished in the past twelve months than in several years previous. Too much praise cannot be given to the great work of Dr. Fischer. The live stock interests have no better friend or champion than he. He stands at the head of his profession and is ambitious to adorn his calling.

In 1908 the State Board of Agriculture, acting as the State Board of Live Stock Commissioners, authorized Dr. Fischer to make experiments with hog cholera serum. A beginning was made. Last year the Legislature gave three thousand dollars to carry on this work. It has been an absolute success. The work of the Reynoldsburg cholera serum plant is attracting world wide attention. In the last few months representatives from nine different states have come to learn about the results of Dr. Fischer's experiments. Not long since a representative from Sweden paid this Department a visit to ascertain just what was being accomplished.

It is not too much to say that Dr. Paul Fischer has accomplished more to prevent hog cholera than any other man in the world has ever done.

Farmers should inform themselves how inexpensive and how valuable this treatment is.

Special attention is called to the annual report of the State Board of Live Stock Commissioners, which is now in the hands of the printer. Every farmer in Ohio should read this.

### THE STATE FAIR

The last State Fair was a record breaker, both in number attending and in number of exhibits. With one day's downpour of rain, which reduced the admissions by many thousands, the gate receipts were still beyond those of any previous years. The overflow exhibits in many departments caused an expenditure of nearly one thousand dollars in payment of rent for tents to accommodate them. The State Fair has been making rapid strides in growth and the past year was no exception.

For the first time a bank was established on the grounds, and premiums were paid before the close of the fair to all exhibitors who cared to present their checks.

The many words of praise from exhibitors indicated their appreciation of this new feature.

Another new and interesting feature was the displays of the various state institutions, which added greatly to the educational value of the exposition. Our thanks for same are hereby expressed.

A thorough system of checking and accounting of gate admissions was inaugurated by means of coin admission boxes.

Hundreds of free passes were refused and cut off.

Passes were issued to members of the Legislature, newspapers, crop correspondents, presidents and secretaries of county fairs and farmers' institutes, privilege men, speed men, manufacturers, merchants and machinery men.

Too much credit cannot be given to the newspapers of the state for the splendid support which they gave to the State Fair. They gave far beyond what they received in return. The spirit of public good must have induced them to become benefactors in the cause.

The support and good will from the county fair boys added much to the success of the attendance and the exhibits. The feeling and sentiment that the State Fair is something in which all good citizens are stockholders impelled them to give generous and undivided support to Ohio's great exposition. Our thanks are due and given.

The city of Columbus took greater interest than ever before and helped to secure and make a record breaking record for Ohio State Fair. "Columbus Day" was in every way a success, because of the loyal, unstinted support of the capital city.

The great central idea of the fair was educational value to the people who came and saw it. It is quite doubtful whether any state in the Union ever built up a more magnificent and gigantic exhibit of products and wares than did the people of Ohio at their State Fair in the year 1909.

### COMMERCIAL FERTILIZERS

During the year 1909 six hundred and sixty-six brands of commercial fertilizer were licensed, as against five hundred and sixty-four the previous year. It is unlawful to sell any commercial fertilizer in Ohio without the payment of a license of \$20 for each brand. The cost of each license must be paid either by the manufacturer or the dealer selling it. Out of this fee is paid the cost of collecting samples and the charges of the official chemist for analyses. This money is all paid into the state treasury and what remains after above charges are deducted goes to the credit of the agricultural fund.

It has been reported in the newspapers that the suits filed against the State Board of Agriculture and its officers in the fertilizer litigation have been dis-

missed, although no official notice has been received to that effect by our Board.

The results of the chemical analyses of each brand collected have been published from month to month by the Secretary in the Official Bulletin. This has afforded farmers information and protection in buying this commodity as they could inform themselves whether the brand was good or bad as soon as the chemist has reported his findings. Heretofore it has been the practice to publish a report of these findings after the close of the year, but this information came too late to afford the needed protection to the consumer. Publicity is the people's policeman.

At the present time a suit brought by the American Reduction Company of Pittsburg, is pending in the United States Court, which raises the legality of the law.

The attorney general's office has advised that the law is sadly in need of revision, and that the legal department of the state will assist in revising the present statutes and placing an effective law at the disposal of the Board. The present Legislature will be asked to remedy the law as it now stands.

All publicity possible has been given to the brands of fertilizer falling below the claims of the manufacturer, or what the law requires. In the October Bulletin, a list of all brands falling below either the claims of the manufacturer or the requirements of law, were published under the head of "Stop! Look! Listen!" A number of manufacturers have made objection to this which they are pleased to call the "black list," but the Board believes it should give all publicity possible, and all protection and information possible, to the farmers. This method seemed wise in view of the fact that a suit is pending in the federal court against the Board enforcing the present law, and in view of the fact that the present law is not as strong as it should be, and is recommended to be revised by our legal advisers. Our Board has had several sad experiences in court with weak laws and heavy costs to pay.

Many farmers refuse to pay for commercial fertilizer where the state chemist finds it below the standard. This is in itself a hardship and penalty to fraudulent manufacturers. While the monthly publication of this information met with some opposition at first, yet the manufacturers of reliable goods in this line are now commending it and are making efforts to keep their goods up to or above the standard, and for the year 1910 this fact will be emphasized even more.

### COMMERCIAL FEEDS

Three hundred and three brands of commercial feeds were licensed during the year for which the fee is \$25 for each brand. The previous year one hundred and seventy-one brands were licensed.

The same plan of publication as outlined in commercial fertilizers was also pursued in commercial feeds. In this case a number of firms paid license fees for the purpose of having their brands appear in the Official Bulletin. The people of Ohio should use caution in the purchase of this article. The Official Bulletin of this Department should be consulted before buying or paying for either feeds or fertilizers.

### CROP REPORTING SERVICE

Monthly crop reports are made in the Bulletin, advance sheets of which are sent to the newspapers immediately after the close of each month. The

crop reporters receive and ask no pay for this work. As a rule they are among the best citizens of their community and perform this service from the standpoint of good citizenship and generous inclination.

As a matter of information I have herewith included a financial statement of the Board's business for the year. This shows the receipts from all sources, including appropriations made by the state legislature. It also shows the expenditures for all purposes and the amounts. It also shows the balances remaining in the different funds, if any. This report is as follows:

## OHIO STATE FAIR, 1909.

## RECEIPTS.

Privileges .....	\$10,184 00	
Sale of space.....	3,097 80	
Deposits on county exhibits.....	50 00	
Horse fees .....	842 00	
Cattle fees .....	1,329 00	
Swine fees .....	455 00	
Sheep fees .....	555 00	
Poultry fees .....	462 74	
Care of exhibits.....	46 00	
Speed entrance fees.....	4,960 00	
Special premiums .....	1,096 27	
Refund of premiums .....	102 33	
Refund from Columbus Merchandise Co., on account of error in invoice.....	51 30	
Refund of money advanced on amusement contract.....	500 00	
Refund of police pay roll.....	77 00	
Gate admissions, State Fair.....	56,701 75	
Grand stand admissions, State Fair.....	6,570 50	
<b>Total.....</b>		<b>\$87,080 69</b>

## EXPENDITURES.

Material and supplies for Fair.....	\$885 56	
Printing and advertising.....	12,411 20	
Expense of Fair departments.....	5,599 91	
General Fair expense.....	18,124 44	
Premiums .....	33,021 61	
<b>Total.....</b>		<b>\$70,042 72</b>
<b>Profits of Fair.....</b>		<b>\$17,037 97</b>

COST OF FAIR GROUNDS, BUILDINGS AND IMPROVEMENTS THEREON,  
TO DATE.

Cost of State Fair grounds and improvements thereon at close of 1908.....	\$773,049 93
Expended for repairs and improvements in 1909.....	48,458 63

## ENCOURAGEMENT OF AGRICULTURE

## RECEIPTS.

Balance from 1908.....	\$4,082 77	
Appropriation by legislature.....	28,000 00	
<b>Total.....</b>		<b>\$32,082 77</b>

## EXPENDITURES.

Expended for department salaries.....	\$12,336 37
Expended for postage and telegraph.....	2,910 76
Expended for telephone service.....	354 52
Expended for express and freight.....	671 94
Expended for general department expense, office supplies, etc.....	826 14
Expended for expenses of members.....	1,694 64
Expended for salaries of chief and deputy inspectors Nurseries and Orchards.....	5,962 17
Expended for expenses of Nursery and Orchard inspectors.....	4,987 02
Expended for general expenses of Nursery and Orchard Division.....	196 62
Total.....	<u>\$29,940 18</u>
Balance in fund.....	\$2,142 59

## SERUM FOR HOG CHOLERA

## RECEIPTS.

Appropriation by legislature.....	\$3,000 00
Received from sale of serum and pigs.....	3,028 67
Total.....	<u>\$6,028 67</u>

## EXPENDITURES.

Expended for care of pigs.....	\$89 40
Expended for feed supplies.....	979 11
Expended for purchase of pigs.....	975 74
Expended for miscellaneous supplies, equipment of serum farm, etc.....	2,460 77
Total.....	<u>\$4,505 02</u>
Balance in fund.....	\$1,523 65

## SUPPRESSION AND PREVENTION OF DISEASE AMONG LIVE STOCK

## RECEIPTS.

Balance from 1908.....	\$448 39
Appropriation by legislature.....	15,000 00
Total.....	<u>\$15,448 39</u>

## EXPENDITURES.

Expended for salaries of veterinarians.....	\$8,690 80
Expended for expenses of veterinarians.....	2,312 87
Expended for expenses of members.....	27 90
Expended for general expenses, office and laboratory supplies.....	2,393 11
Total.....	<u>\$13,324 68</u>
Balance in fund.....	\$2,123 71

**COMMERCIAL FERTILIZERS**

Received from license fees for commercial fertilizers..	\$13,320 00	
Received from fees for special analyses of fertilizers..	332 00	
Total.....		\$13,652 00
Expended for analyses, salaries and expenses of inspectors .....	\$6,401 48	
Total.....		6,401 48
Balance deposited in treasury.....		\$7,250 52

**COMMERCIAL FEED STUFFS**

Received from license fees for feed stuffs.....	\$7,575 00	
Received from fees for special analyses of feed stuffs...	160 00	
Total.....		\$7,735 00 .
Expended for analyses, salaries and expenses of inspectors .....	3,958 31	
Balance deposited in treasury.....		\$3,776 69

**FARMERS' INSTITUTES**

Received from county farmers' institutes..... \$11,000 00

In closing I desire to express my full appreciation of the high honor accorded to me in serving my state as the president of the Ohio State Board of Agriculture. I have done the best I could. My heart, soul and sympathies are with the great cause of agriculture. As a citizen of our great state, I shall never fail to do all that lies within my power to advance, promote and better the conditions of the farmer as well as the welfare of all my countrymen. I want to urge the attention of the law makers of this great commonwealth to mark well the needs of the producing classes and to treat them justly and in no wise cripple the real needs of the cause by too meager support. The business of this meeting being paramount, and with the expression of good cheer, good will and good health to all the people of the state, we will now take up the program and proceed to the business before this convention.

**ADDRESS OF GOVERNOR JUDSON HARMON.**

Mr. Chairman and Fellow Citizens:—When I came here to serve you and the rest of the people of this state, just a year ago, I found that one of my regular duties was to speak for the state, and the city of Columbus, some words of welcome, and, if possible, encouragement to the many associations and organizations which here assemble. I thought at first it would be a hard task which I should not like, but I want to say that none of my duties has been more pleasant, none has been more instructive and none more inspiring than to see the moving pictures of the great industries of this state, the faces and

figures, intelligent and energetic, of the men who organized them and push them forward. It has been an inspiration to feel that I am for a brief while entrusted with the chief executive authority of such people.

The first one that I addressed was this body; and now that it comes back again and heads the roll a second time, the first organization of any sort that I have been called on to address twice, it admonishes me, and doubtless does you, that another year has gone by more quickly than the last, that we are all a year older, and I am sure that each of us inquires whether he is a year wiser and whether during the year that is past he has made any improvement in what he accomplished in the way of public and private duty over the year before. Because it is only as a man or body of men take their bearings now and then, examine themselves, scrutinize their work, compare it with what has been done by others, that they are moved to the energy which makes progress. One thing I am sure of, and that is we are better acquainted than we were a year ago; I did not know you and you did not know me. I knew the tremendous importance of your subject, but I didn't know much about it. I cannot say that I know much about it now, but the consciousness of one's shortcomings is the beginning of all wisdom, and when a man knows he doesn't know anything about a matter he must deal with, it is his duty to find out about it. That is the first step, and if I have not learned anything else I have learned in this year to think more highly of the great industry you represent than I ever did, though I always placed it in the front rank, and to learn some things about it which a wise people conducting government on their own behalf ought to know and keep in mind.

Some men of great distinction in their pursuits, the two principal ones of whom I have the pleasure to know, have during the past year given the public the benefit of their study and observation in our own and other lands on this great subject of agriculture. These two are engaged in the business of carriage by railroad and steamboat, so they have an interest in a way, but the interest was subordinated in what they said to the interests of the entire people; for it has been pointed out that with all the inventions that the ingenuity of man has produced, especially in our country, nobody has ever claimed he had the slightest idea of getting anything to live on except what nature produces. The statistics show that only three per cent. of the food products of the world comes out of the water, and ninety-seven per cent. comes out of the land; and when you see the teeming millions of the earth's population increasing at a tremendous rate; when you see our own country with her gates crowded with strangers coming to be added to the natural increase of population; when you realize that there are no more public lands to be entered, none to be bought for \$1.25 per acre, or to be bought at all in many cases; when you realize that unless there should be other tremendous convulsions changing the surface of the earth, in which case none of us would be personally interested in what came afterward, there cannot be more land than there is now, you will understand why the problem of the supply of food is agitating all the countries of the world and especially our own. Because, strange to say, with all the distinction we have gained in invention in the way of agricultural appliances, until we have made a boy who was raised when I was, having to do everything nearly with his hands, made envious to see farmers riding around, to do everything by machinery of all sorts, the average yield of all farm products in this great agricultural country is not creditable. She makes a poor showing in comparison with other nations, poorer in that than in any other industry. The figures have been given—I cannot now give them—but they are in the reports taken from the official records of the principal countries, Germany, England, France, the Nether-



lands, showing that they raise from two to two and a half and three times more of all sorts of products to the acre than we do, and they have no better soil, no better climate. God has not smiled more brightly on any other land than ours. We have the soil, we have the rainfall, we have the climate, we are singularly free from great calamities like earthquakes and tornadoes. You can trust nature to produce if you give nature the chance; and yet while all other lines of our industries have received a great impetus from general and intelligent thought, agriculture seems to have been largely passed by and the idea prevails that all man has to do is to scratch the ground, throw some seed in it, plow once in a while, and trust the Lord to do the rest. The most productive thing is practical intelligence properly applied, and this must be done in agriculture as well as anything else. What is the reason then the little country of France, that is not as big as one state in the American union, could pay that enormous war indemnity to Germany which everybody thought would break her up, and in twenty or twenty-five years after be the great creditor nation as she is today? Why? Because long ago, as soon as these oppressed people—peasants they call them; we would all have been peasants in those days—as soon as they struck down the oppression of arbitrary authority imposed upon them in every possible way, by taking from them most of the products of the soil to pay the cost of royal junketing and extravagant vices, as soon as they did that they began to treat agriculture as a pursuit requiring the best thought as well as the best muscular energy of mankind. (Applause.) And now they have forty-five thousand agricultural schools in France, every one of them with a little plot around it, where they not merely teach boys out of books but send them out into the field to learn what must be done to make things grow under the smile of God; and the result is that France is the greatest producer and the greatest creditor nation in the world today, while we are just beginning to wake up in this country. Some have contrasted what we have spent for battleships and other warlike purposes, and have shown that the cost of one battleship for a year, with the cost of construction, would put two great agricultural experiment stations in every state in the Union. Now, I am not going to discuss the battleship question. Since we have got to be a world power we have to pay the price I suppose; but why not have the other too? If we must go without one, I say let us go without the battleship, anyhow until we get the other. And one thing struck me as peculiar—I have got a good deal of the Yankee in me, and having been raised as the oldest son, who is always the experimental station in every family, of a country minister with a large family—I got certain ideas ground into me that I cannot get rid of, and I don't believe I want to get rid of, and one of them is that I cannot bear to see a dollar wasted or fail to produce one hundred cents' worth of result. When I found one of my duties was to get up what they call an annual message, telling the General Assembly, many of whom have been in the public service longer than I have, some things they probably know better than I do, and recommend measures, it struck me we were spending a lot of money in the state, and I thought I would get the auditors' reports beginning in 1890, and dig from them how much we have spent, how much the expenses grew in the decennial periods, and what we spent it for. I spent a good many nights on it, and as there are no ministers here I will say I took a thought or two on Sunday, a minute or two when I was in a pinch, and the showing was rather extraordinary to my mind. So, without any comment whatever, I took up those figures in that message. The total of the general revenue fund—I didn't count the schools, the universities and the sinking fund—but then I took the different departments and institutions, and then I took some specimens of particular ones, and while we spent about thirteen millions from all sources, for schools and all that, and spent between eight and nine millions of

general revenue, I was astonished to find that the great science of agriculture, the original thing that made Ohio a state, for we were a state of farmers when we entered into the Union and we must remain a state of farmers as long as this great state of Ohio exists—out of that eight or nine millions of revenue, how much do you think we spent last year for purposes of agriculture in all directions? One hundred and forty-seven thousand dollars. (Applause.)

Some of these increases I believe we can do without it. It occurred to me that a people like ours whom experts tell us will soon be up to the point where we have nothing to export, if conditions continue as they are, with a population growing and the products of the fields making no further advance, consumption and production in 1914 will be neck and neck, and soon after we would have to begin importing, as we are now doing with potatoes. I thought it was queer that we could not spend a little more money to get more out of our fields, and I think so now. (Applause.)

I found one of these gentlemen had figured up how the federal government spends money. I am not one of those that want to call on Uncle Sam every time they want something done, and I think we can do a good many things better for ourselves. At the same time Uncle Sam can do many things we cannot do, because of being represented in foreign nations in the way of commerce and improvements of all sorts, and on account of being able to take a view of the entire Union, and I think this Department of Agriculture ought to be able to do much for us, and we ought to work hand in hand, the state and the nation. One of my advantages as a talking farmer, not having been a practical one since I was a boy, is that I sat in the cabinet once with the Secretary of Agriculture, and I had the pleasure of seeing a great deal of him; and I thought, now they are going to do something, we are going to show up alongside of these Frenchmen, these Dutchmen and these British that we think aren't nearly as good as we are for any purpose, we are going to show up better than they. I noticed one of these gentlemen in his very able address showed that in 1907 nearly fifty-nine per cent. of all the expenditures of the federal government was for military purposes, including pensions, army and navy—think of it, nearly fifty-nine per cent. How much for education? Three and one-third per cent. How much for agriculture? One and eight-tenths per cent. Now for a peaceful people that is a pretty bad showing. And the next year, in 1908, which were the last figures at hand, the war purpose expenditures had gone up from nearly fifty-nine per cent. to sixty-six per cent., while education dropped from three and one-third per cent. to three per cent., and agriculture made the magnificent advance from one and eight-tenths per cent. to two per cent. And now I say, without hesitation, that the most important subjects before the state and before the nation today are agriculture and its kindred subjects, and the first one of them is good roads in Ohio and all around the country, and while I believe in economy, I believe in a wise economy, going without the things you need least or don't need at all and spending the money on things you do need quick and need good. (Applause.)

One of the interesting things across the street is getting the very many ideas and suggestions that come in there. I really have not the time to read and carefully consider many of them, but if you ever get in the center of a great state like Ohio, where everybody that has a thought sends it to you, as he ought, for that is what makes an intelligent and progressive people, you will be struck with the amount of ingenious thought and study given to public questions, and one of them is this question of the dearness of family and other necessities. I have had a lot of letters about it, and several of them said "High prices are a good thing for the farmer." Now, of course, if the farmers got

them I wouldn't say a word. I think the farmer works more hours and gets less than anybody else in the world that labors, and nobody begrudges what he gets. (Applause.) The trouble is it runs around through so many other profit-taking hands before it gets to the man that uses it that the farmer's price is lost sight of. But here is what one man said: "If we raise more crops we won't get so much." Is that true? If it is true, if you raise a much larger amount per acre of whatever you produce and get so much less for it that it is not worth while, that might be worth thinking about. Can it be so? In the first place it is going to take the expenditures of every effort of mind and body to keep up with the growth of population anyhow. There is not going to be any fall in the prices of agricultural products. I don't care how big your crop is there is a market for it. But just consider. If a man had to get another farm to raise more, and go to all the expense of investment in the farm, in appliances for its cultivation and hire more men to run it, there might be something in this. The farmer would say he would just as soon get a harvest of one hundred bushels at one dollar per bushel as to get two hundred bushels at fifty cents, and I would be of the same opinion under those conditions.

But that is not the proposition. You don't have to get another farm. The proposition is to get twice as much out of your own farm. How do you get it? By making scientific, historical research, observation in other lands, the hand-maids of agriculture, as they ought to be, through your experimental stations, agricultural schools and every one of your schools. Now, if with the same farm, the same investment, the same help, the same everything you can raise twice as much as you did before, half of it is what the boys call "velvet," isn't it? I learned that in railroading. You have a train and have to haul it. After you have half a load the rest is clear profit, or nearly so, excepting the natural wear and tear. Exactly so with the farmer. If he will double his crops he is vastly increasing the real profit, because the second half don't cost much. He already has everything necessary to produce it. So I am anxious to see better figures shown for the farmers in Ohio, and we are going to see them. I noticed when I went around to the fairs last summer, and to some extent the summer before, nearly everywhere I saw an exhibit from the Experiment Station, and I noticed literature all about enforcing upon everyone the importance of care and attention to the essentials of agriculture. Take the matter of seed. A man goes and throws anything into the ground, takes a chance on it. He don't know what he will get. It costs just as much to raise a cornstalk that won't make any ear, or only makes one ear, as it does to raise a stalk that makes three ears. A man don't want to raise fodder or weeds, he don't want his labor and part of the fertility of his soil wasted. Here are railroad trains running all over the state and other states, schools on wheels, giving free to all the information requisite for the choice of seeds and the treatment of the soil.

I only came over to say "Welcome, gentlemen," as the first on the roll of the second year, but I couldn't help briefly showing you the profound interest I take in the subject which you are here to consider, and I am very glad to say, because of the awakened interest being reflected as it is from all over the state, that you had the finest state fair you ever had, all due to the interest that you took in it. (Applause.)

When I came here I found that some of these fertilizer manufacturers had us all tied up, hand and foot, and they pretty nearly had our mouths tied up too, so we could make no outcry. I am happy to tell you that that is all over, that the Department of Agriculture, which is maintained in the interest of your great industry, is free now to examine and test and proclaim to you the result of the

tests of all the stuff that is being taken around over the state to be sold to the farmers. (Applause.) We don't claim that perfection has been reached by any means, because when a man is satisfied with himself he is of no further use to anyone; but we are gratified to state that we have made some progress.

I may not be here to welcome you another year, but if I am not, whoever is cannot say truthfully that he takes a deeper interest in these great and magnificent farms that make up the state of Ohio on which an enterprise greater than all our factories is maintained, that he takes a greater interest in them or wishes them success any more sincerely than I do. (Applause.)

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### AFTERNOON SESSION.

Called to order by the President.

Music by the Angelus Quartette.

Mr. Bradfute: Mr. President and Gentlemen:—I think it will interest all of you to know that there is a possibility and probability that the next National Corn Show, which not only includes corn, but all cereal crops, may be held in the city of Columbus next winter. I think you will all be glad to know of the possibility of such a thing, and I think that every farmer in the state of Ohio ought to make something of an effort to help secure this show for this city. Those of you who have kept track of the magnitude of this show which represents to the grain growing fraternity what the International does to the live stock of Chicago. This show represents the same thing. It is national, and the opportunities for securing it for Columbus is a very unusual thing. The president and the secretary are in the city, and are talking to the Board of Commerce in this city, and the State Board of Agriculture, to see what they can do to bring this show here, and I would like to offer a motion, if I may, that this body here heartily endorse any action which the State Board of Agriculture may take in the efforts to secure this show for our state. I have given the reasons for the motion, and hope it can be carried.

Motion seconded and carried.

President Kilgore: We have with us this afternoon a man from the great state of Iowa, a state which produces more corn, horses, cattle and sheep than any other state in the Union. It also holds the greatest fair in point of entry receipts of any state in the Union, and this man is the secretary of the State Board of Agriculture.

### EDUCATIONAL VALUE OF FAIRS AND EXPOSITIONS.

HON. J. C. SIMPSON, Secretary of Agriculture, Iowa.

Mr. Chairman, Ladies and Gentlemen:—I was very much interested this morning in what your governor had to say with reference to the need of more able,

more intensive methods in farming, and this has been a hobby of mine and I may say of a great many people in Iowa for some time. We have under way at the present time a campaign to establish a bureau of publicity and advertising in our state. The purpose of this bureau is to gather the things and the little successes or big successes that are being done by the individual of our state, and spread it broadcast throughout the land. Our motto is "Smaller farms, more farmers; smaller fields and larger yields."

I don't know why I was asked to come to Ohio to talk to you upon this subject—"Educational Value of Fairs and Expositions"—unless it was the desire of Mr. Sandles to get even with me for calling him out to Iowa last winter.

For several years it has been my pleasure to attend the annual meetings of the American Association of Fairs and Expositions, which is the "round up" institute and school of instruction for those actively engaged in the management of our great fairs and expositions. These annual meetings not only have been a source of pleasure but have been very profitable to me, for it is here that I come in direct touch with the officials of many of the greatest exhibitions in America—when I say America I mean the world—and have the opportunity of discussing with them the many problems that are constantly before us, and to pick up and learn of any new feature that will add to their educational value. At these gatherings I not only seek to gather what I can in regard to fair work, but I study the fair men as well, for after all it is the man whose hand is on the throttle that makes the engine go, and it is the men to whom is intrusted the management that makes the fair what it should be. It was at one of these meetings I had the pleasure of meeting your secretary and poet, Mr. Sandles, and learned to know what a live wire he is; that he is a man of action as well as words; that is why I asked him to come out to Iowa last winter to tell our people something of the purposes for which fairs and expositions are held. While human beings are all alike in many ways, there is a difference in the gifts God has given each. Now, for instance, take Mr. Sandles and myself. It seems that in preparing Mr. Sandles for this world He had plenty of material for speech making and poetry, which supply was entirely exhausted before He reached me. That is why, with your permission, I will use manuscript this afternoon, and in doing so I hope to fare better than the clergyman I once heard of. Two Presbyterian ministers exchanged pulpits; one of the ministers was very anxious to know whether he had pleased his congregation, so after the sermon he asked one of the elders how he liked the sermon. The elder was silent for a moment, but finally admitted there were three things about the sermon which he did not like. The minister, of course, was somewhat perplexed, but finally mustered up courage to ask what the objections were. The elder said, "You read it." The minister braced up a little and said he was sorry that was an objection, but that it was his custom; his own people did not object to his reading his sermons and he hoped the elder would overlook that point, and asked what further objections he had to the sermon. The elder replied, "You did not read it well." Of course the minister was a good deal disappointed, but finally asked for the third objection, when the elder replied very quickly, "It wasn't worth the reading."

While I am not a public speaker, I am going to tell you in my humble way wherein lies the educational value of fairs and expositions.

First, there must be some good cause for their existence. Second, this cause must be worthy, must bring some benefit to the agriculturist and those engaged in industrial work, otherwise they would not be maintained by practically every state in the Union. Some time ago, while looking through the pages of one of

America's greatest farm journals, I found upon its editorial page a very good definition of what a state fair really is. It follows:

"The state fair is full of interest and meets the wants of city and country worker alike. It is the state on exhibition. It is a great showing of its products, manufactures, crops, live stock, machinery, minerals and all the methods and processes by which the state has attained its position in the world. It is a great university which teaches by object lessons. It is the one place where the results of their labors may be seen. The state fair is the advertising agent of the state. It is the great show window of its store of accomplishments and what it has to offer. It is the exposition center of all the interests and industries of the commonwealth, and it is the place for the annual reunion of its citizens. To all its people the educational and social value of the state fair is unquestioned and unmeasured, but it has a patriotic duty as well. It is a duty which each citizen owes to himself, his family, his neighbors and his state to attend the fair, see what is to be seen, learn what is to be learned, touch elbows with his fellowmen in the march of progress and spend a most profitable vacation."

Most of our fairs are now living up to the above standard of excellence. They are distinctly industrial and agricultural expositions, attended by a typical industrial and agricultural folk who are intelligent, prosperous, happy, well fed, well read, well dressed; the people who stand for "good farming, clear thinking, right living." It is because of the character of the people that the exhibit of practically everything needed on the farm and in the house may be found in the exhibit; the very best horses, cattle, sheep, swine, poultry, vehicles, improved implements and appliances of every description, seeds of the best varieties of farm crops, fruits, plumbing and lighting systems, house furnishings; everything, in fact, needed on an up-to-date farm of use in a well ordered home. The man who makes for sale anything that will lighten the work of the farmer, improve his condition or contribute to the comfort of his family, has found there is no better place to display his wares than at a well conducted state fair. Farmers are quick to recognize and appreciate any article of real merit.

The thinking men and women of today must grasp the social and industrial problems with which we stand face to face, in the light of future events and probable results, if modern society would fulfill its mission. The present generation must project itself into the future and blaze its way with enlightened purpose and suggestive ideals for those who shall succeed us in the realm of social effort and educational progress. The function of all educational effort should be to enlighten the intellect, ennoble the hearts of the people and stimulate the social mind. The basic principles of good citizenship are to be found in all legitimate forms of instruction, and whatever form of instruction is employed, or whatever relates to that effort, should have a large place in public utterance. Any effort in the way of giving direction to the public thought is effective in proportion as it is potential, and there is no institution which possesses more effective possibilities for the enlightenment of the human mind than does the state fair. Every effort toward instruction is an incident in the career of the prospective citizen. Association of individuals is educational. Our people are coming more and more to regard any educational enterprise as a center of community interest, and whatever relates to that interest must be of paramount importance in the evolution of society. Our people no longer speak of finishing an education, for they have come to realize that in all experience they are carrying on education. Education is no longer a matter of schools and books. The deepest part of culture to which our people must attain must come through life work.

To the farmer especially the fair is a great clearing house of suggestive material for self improvement and neighborly co-operation. Its spirit is the kind which

seeks to offer remedies for ills which exist. It is the kind of spirit which touches the farmer's life most vitally. It finds the man and does not compel the man to find it. It enters the home and enlightens the burdens of the home maker. We have at our state fair, on a most comprehensive scale, an organized co-operative demonstration work. It has been a long hard struggle to convince the people of the educational value of our fairs. This has been especially true throughout the Middle West. It is both foolish and impracticable to expect the great state fairs to provide adequate and necessary equipment to properly care for the ever-increasing exhibits and attendance from its gate receipts. You do not expect this of any other educational institution. At that a great many of our state fairs have added hundreds of thousands of dollars to their grounds in betterment out of the annual receipts of the fair. It is the only one of a state's many schools that practically pays for its maintenance. A man, woman or child will learn more of practical and lasting value at a fair in one day than can possibly be learned elsewhere in the same length of time. A fair—and when I speak of a fair I allude to one with a diversified exhibit—with an attendance of two hundred thousand in a week gives more days of instruction than a school with an average attendance of one thousand per day running nine months in a year. Not only that, but it reaches all classes and ages, old and young, city and country people alike. Compare, if you please, the cost of maintaining a school with the amount annually expended by a state for its fair, and the fair becomes a paragon of cheapness as well as utility. During the last session of the Iowa legislature certain officials of our state university thought that the legislature would deal more liberally with their institution if they could sidetrack the appropriation bill recommended by the State Board of Agriculture for further improvements at our state fair and exposition grounds. It was not a difficult task, however, to convince the members that such action on their part would not be very popular. For instance, in a county whose proportion of taxes for the support of the state university was annually six thousand dollars, with but four students enrolled at the university, but who annually sent to the state fair from four to six thousand of her people, that county was vastly more benefited by this large attendance of her people to the fair than it could possibly be by the four young men at the university, and the people of the county would certainly resent any action upon the part of the legislature which would cripple the state fair for no other purpose than to send a young man or two to Iowa City. The university crowd soon found that there were other educational institutions within our state as near to the hearts of the people as the one at Iowa City. The fair as an educational institution is a comparatively new thought. At least this is what one would be led to believe by the attitude of the average member of the state legislatures. They are prone at times to look upon an appropriation for the betterment of the state fair grounds as so much money wasted, not going into the matter deep enough to realize the lasting benefits the fair is to the educational welfare of the state.

Very well do I remember the long hard fight the Iowa Department of Agriculture was compelled to make before they secured the appropriation for the erection of the stock pavilion, really the first permanent building erected upon the Iowa State Fair and Exposition grounds. In looking over some papers in my office a few days ago I found an old issue of the Daily Capital, published the day after the bill was passed by the senate in the closing days of the session. In looking over the pages of this paper I found the following reference to the passage of the bill under the headline "Lewis Grows Sarcastic; Talks of the Silk-Hatted Farmers of Iowa." The article follows:

"The State Department of Agriculture today won the last round before the legislature in its fight for an appropriation of \$37,000 with which to erect a fire-

proof live stock pavilion on the state fair and exposition grounds. The bill went through the senate after a hard fight, led by Porter and Lewis, without amendment and with but two votes cast against it. The fight for the bill was led by Harriman and Hopkins, with the assistance of several other senators in presenting the claims of the agricultural interests of the state for this appropriation. Lewis became sarcastic and denunciatory to a large degree in his arguments against the bill, declaring that the real agricultural interests of the state were not back of the measure. 'Who is asking for this bill?' he said. 'Not the agricultural interests of the state, but the State Department of Agriculture. Who runs the State Department of Agriculture? Not the farmers, but the presidents and secretaries of the local fair associations of the state, which are gambling institutions pure and simple. Who is asking for this bill? I say it is the silk-hatted farmers of Iowa who are trying to ape "the 400" of New York City which has recently built a glass house in which to show pug dogs.' (I might here say that in the very short space of eight years intervening since the above remarks were made all Iowa farmers are entitled to wear silk hats, and further than that, thousands of them are riding in automobiles.) Continuing he said: "If we appropriate this money to build a glass stock pavilion in which to show off the stallions and bulls of Iowa, two years from now we will be asked for money from the same interests with which to erect a gold lined auditorium." Right here I desire to say that he was correct in his prediction of what would happen in two years; but instead of a "gold lined auditorium," it was an agricultural building to be filled with products that were bringing gold into the pockets of the Iowa farmer, and better—the money was appropriated without much fuss, and every two years since the same thing has been repeated, only on a larger degree, and we have but little doubt will continue every two years until Iowa has the best equipped state fair and exposition grounds in America. It is no longer a question with our people whether the appropriation should be made for improvements to our state fair grounds, but how much of the state's available funds can be spared for the purpose. Each succeeding year adds to its value as an educational institution of high rank, and our people are more and more coming to look upon it in this light. In regard to the appropriation they are a little like the slave boy who was in the habit of stealing chickens from his master. The master finally said to him, "If you steal another chicken I am going to take you up in front of the big house, tie you to a tree, ring the bell and let all the others see you, and the overseer is going to lash you if you steal another chicken." The boy went along for three weeks, when one night he heard a rooster crow. The temptation was too strong, so he went out and got the bird, dressed it and was in the act of eating it when his master came in. The master started to carry out his threats, so he rang the bell, built a great fire and tied the boy to a post, then his heart failed him and he said, "John, tell me now, why did you steal that chicken?" The boy said, "Massa, I'll tell you. You owns this nigger and you owns this here chicken; we both your property. When I steal the chicken you ain't losin' nothin'; you may lost the chicken but you got Mr. Nigger." So it is with a state providing ample funds to build up these great institutions of learning—they may be out the money but they have the fair. As I have said before, schools, colleges and books are no longer the only means of education. There must be some practical demonstrations to keep one in touch with his work. I can make my point clearer by another story: There was a time in the state of Maine when they passed an inspection law prohibiting the sale of game. This law made it a crime to take a quail out of the state; it provided for a system of inspection. A college graduate, a scientific man, was put in charge of the work. He was a pure scientist; he had studied the habits of the quail, how they flew, when they were ready to shoot, what kind of worms they



consumed, and all about them; these matters he had down to a fine point. He made a trip over the state visiting his inspectors and at one place found a farmer with whom he entered into conversation as to the work of the various inspectors. He told the farmer he hated to have such a man as one of his inspectors, and that he would have to have him removed. That made the farmer angry, and he said to the professor: "Look here, I have a dog that knows more about this business than you do." Now this dog was one of the most ornery looking curs one could imagine. Continuing, the farmer said, "I'll prove it to you. There are several people coming down the road, one with a violin case, several with small trunks, a few others with satchels and a boy with a small grip. Now you find out whether there are quail there." The scientific man said, "How can I tell?" "Well," said the farmer, "we will try the dog." So he said, "Sick 'em, Shep." The dog ran over, put his nose to the trunks and valises, and when he got to the violin case he stuck. The violin case was opened and there were a dozen quail. So the farmer said, "Professor, you may have the science but you ain't got the smell." So would our educational system be incomplete if we were to stop with schools and colleges without the actual comparisons and demonstrations to be seen at the great state fairs.

A good illustration of this occurred in Iowa a year or two ago. At one of our farmers' institutes several farmers brought in stock for use in the short course work. Among the lot was a shorthorn bull calf owned by a farmer who had for years been breeding Shorthorn cattle, but was scarcely known outside of his immediate vicinity; consequently, in the sales made the price was but little, if any, above the regular farm price for common cattle. The president of the State Board of Agriculture, who was attending these meetings, saw the calf and was at once struck with his superior quality. He asked the owner if he would not get him ready and bring him to the state fair. The owner was of that type of men who are satisfied with their lot; he had never attended the state fair and could not see whereby he would be benefited by showing the calf. A few weeks later the president was telling me of the calf and his unsuccessful effort to get the owner to bring him to the fair. While I had not seen the calf, I was convinced from what the president had told me of him that he was one of rare quality. I entered into correspondence with the owner, urging him to enter and bring the calf to the state fair, with the same result our president had experienced. One day I accidentally learned this man had a son who was a regular attendant at the short courses held by our agricultural college. Herein I thought was the only opportunity I had for getting the calf to the fair, for I knew the boy must have more advanced ideas than his father. I then took the matter up with the boy, who finally persuaded his father to let him fit the calf to show at the state fair. The calf was duly entered, and within a few hours after he was brought on the fair grounds the Shorthorn exhibitors were all talking about him. He was shown as a junior yearling, and won in his class against the best lot of calves ever brought into the show ring; calves that were shown by and from herds of the most prominent Shorthorn breeders in America. He was afterward made junior champion Shorthorn bull of the show, and by many thought to have been clearly entitled to wear the crown of grand champion. Eight hundred and twenty Shorthorn cattle were entered in this show. The calf was sold for \$3,000 before leaving the grounds. Five hundred would have been a top price for him at the farm, and I doubt very much if he could have been sold for that, for, as I have said, the owner was little known as a breeder of Shorthorns. The calf went to the American Royal Show at Kansas City a few weeks later, where he was made grand champion bull of the breed, winning over the bull that was placed above him at our show. He then went on to the great International Live

Stock Show at Chicago and again was awarded the honor of being the best bull of his breed at the show. Here he again changed hands at \$5,000 and was taken to one of the greatest Shorthorn farms in America, where he is owned today. The results to the owner and breeder of this calf brought from under cover was seen at a sale he had the winter following, when the average price received for his cattle was more than double that of any previous sale. The reason for this was that he had been placed on the map as a breeder of Shorthorn cattle.

The state of Iowa, as most of you know, raises more hogs annually than any other state in the Union. It would naturally show that the annual show of hogs at her state fair would be large. When I get outside of Iowa I dislike to tell how many hogs we have at the fair, for when I do people sort of look at me as if I was of unsound mind. But when I tell you that it takes from five to seven trains of twenty cars each to transport this annual exhibit of mortgage lifters to the Iowa State Fair (and this can be vouched for by swine breeders from your own state who sometimes venture into the wild West with their show herds), you will not be surprised when I tell you that we have in Iowa a hog house covering three acres of ground and costing but a trifle under \$100,000 to build, and that a person passing through all the aisles from one end to the other will have walked over a mile, and that to merely walk around the outside you will have walked nearly one-half mile. Why, in fact, it is so large that it is customary in showing it to visitors or members of the legislature to open the gates and take them through in an automobile. It will house comfortably three thousand hogs as they are put in the pens for show purposes. The number of hogs shown will vary from twenty-five to thirty-two hundred, depending somewhat upon the success of the spring pig crop. Criticism has been made in the past that many hogs are brought to the fair for sale only. We admit this is true, and ask "Why not?" What are we raising hogs for if not to sell? When the fair is made a clearing house and an established market for the sale and purchase of pure bred hogs, is it not doing a good work for our farmers, hundreds of whom come to the fair annually for no other purpose than to select and buy, if they can, a few gilts or young boars with which to strengthen their herds? The number and quality of hogs shown make it necessary if the breeder wishes to sell to bring only animals of superior quality. I maintain that with hogs coming from the herds of over two hundred of the best and most experienced breeders, thereby giving the greatest latitude in making his selections, the Iowa State Fair is improving the value of hogs in Iowa thousands of dollars annually.

In our state we are very much interested in poultry raising. The estimated value of our poultry and eggs last year has been placed at \$25,000,000. I say estimated, for up to the first of the present year we have had no means of gathering yearly our poultry statistics, and must work out our estimates on the percentage plan, taking as a basis the reports from the last state census. We will, however, beginning with this year, get reliable returns annually through the Department of Agriculture which is now empowered by law to furnish blanks for this purpose to each assessor in the state. I said a moment ago we are interested in poultry raising, but not so much as we will be in the near future when our farmers become more familiar with the net profits to be had from this industry. I also said the estimated value of the poultry and egg production last year was placed at \$25,000,000, which is four times the total value of our wheat crop, five times the total value of our rye crop, four times the total value of our potato crop, twice the combined total value of our fruit and garden crop.

With these amazing figures we expect to inaugurate a campaign to double the state's output in poultry and eggs. We expect in a few years to have as clearly established a market and clearing house for the sale and purchase of

good birds at the annual state poultry show as is now established with reference to hogs at the state fair. We expect to do this by getting the farmers more interested in the poultry exhibit, by having as a part of this exhibit the results of experimental work of our state agricultural college, by having facts and figures to show what has been done rather than what can be done, by keeping constantly before our farmers the large profits to be realized from this course and to make our poultry exhibit one of the features of the fair.

Now what I have said with reference to the state fair being the ideal place for the buying and selling of pure bred hogs and poultry is equally true of cattle and horses. A few years ago our horse shows were made up almost entirely of stallions. Now you will find shown about as many mares and fillies as stallions. No man can bring a good pure bred draft mare to our fair without finding a buyer if he desires to sell. On the other hand, if you desire to buy one or a pair of pure bred draft mares of any breed, you will find a larger number to select from. However, at the present time there is a greater demand for these mares than exhibitors at the Iowa State Fair can supply.

The exhibit of implements, machinery and labor-saving devices of all kinds is equally interesting and educational to the public. The exhibit of cement products will within the next few years grow to be one of the most prominent features of the fairs and will do much toward educating the people to the varied uses of this constructive material.

There should be a worthy purpose in every fair or exposition. There must be a beneficial object in view. Those who undertake the management of a fair without well defined ideas of the substantial educational value of such an institution, thinking only of adding another department to the political machine or the creation of places for impecunious politicians, will meet with speedy disappointment. Loftier aims than these must rule. The custom "two terms and out" universally in vogue, or "if it is a good thing, pass it around," should have no standing nor be applied to the management of a fair, or, for that matter, to many other of our public offices. You do not follow this custom in your own affairs, and the same common sense management applied to the ordinary business affairs is equally necessary in a public enterprise such as a fair. Secretary Wilson has been retained in his official capacity longer than any other man occupying a cabinet position. Why? Because he was fitted for and was doing a great work. No school board would think of changing its superintendent or teachers so long as they are doing good work just to pass the positions around. No manufacturer, wholesaler or banking institution would think of changing their foreman, general manager, sales agent, or cashier every few years just to pass the position around; if they did they would soon be on the rocks. This same business sagacity applied to public institutions will work equally as well.

Fair managers should have abiding faith in the utility of their work; they should feel that each annual exhibition has practical educational value to every one of their thousands of visitors, and vigor and earnestness will then characterize their every action. It was with this purpose in view that the Iowa fair management last season undertook the laborious task of making an educational exhibit of farm crops at the last state fair. Early in the season arrangements were made and an organization perfected to collect and arrange exhibits of some of Iowa's field crops. As a result we had an exhibit of farm crops that was worth while from an educational standpoint. It was arranged in a most attractive manner, but its value was in the information furnished. There were samples of first, second and third cuttings of alfalfa from over half of the counties in the state, each bearing a placard upon which was given the name of the grower, the county,

the kind of soil and sample of soil, date of sowing, yield per acre, etc. It was a tremendous object lesson showing the success of growing alfalfa in Iowa. Another section was devoted to grain crops; small leaflets were distributed containing condensed information concerning the different crops, their relative importance to the state, the soil to which they are adapted, amount of seed to use per acre, time of sowing and harvesting, value per acre, etc. Samples of various food products manufactured from the various crops were shown. There is no question but that this exhibit was worth thousands of dollars to Iowa farmers, and particularly to those residing in sections where alfalfa is known to yield excellent returns and where it can be grown at a most excellent profit.

The real success of a fair should be measured from the benefits and pleasure derived from its holding rather than from a financial standpoint, although we must confess the public sometimes measures its success by the net profit or loss in dollars and cents. Effort should be made to have the exhibits well balanced, not losing sight of the amusement features which are a legitimate and necessary adjunct to any well managed fair, for one of our most learned men has said, "Relaxation and recreation are as necessary to the bringing up of our families as education."

In conclusion I wish to go on record as saying, in my judgment, as the years go on our people will come more and more to see the educational benefits from the holding of these great fairs and institutions.

It has been a pleasure for me to come to your state in which so many of our citizens formerly resided. I listened to your program this morning with a great deal of interest, and will return to Iowa convinced that the Buckeye State is still alive to her opportunities. I am glad to have met so many of you here today. I thank you.

President: Governor Harmon has named the following committee to canvass the report made of the corn contest: H. B. Jenkins, of Morrow County; Frank Plessinger, of Darke County; E. L. Cotton, of Lorain County.

Music by the Angelus Quartette.

President: We will now hear the report of the Committee on Credentials.

#### REPORT OF THE COMMITTEE ON CREDENTIALS.

We, the undersigned committee, find no contest except in Scioto County, where there are two legally organized agricultural societies, viz: The Mt. Joy and Lucasville societies, who have amicably adjusted their differences and the Mt. Joy society is to be recognized by the state.

[Signed]

C. H. GANSON,  
B. B. BRUMLEY,  
E. N. BOGGS,  
Committee.

President: What shall be done with the report?

Motion made, seconded and carried that it be adopted.

President: We will now hear the report of the Committee on Resolutions.

#### REPORT OF COMMITTEE ON RESOLUTIONS.

We do hereby congratulate the State Board of Agriculture on the successful fair held in 1909 and the excellent financial showing made.

And furthermore, as the oleomargarine manufacturers are making an effort to repeal the tax on oleomargarine,

*Resolved*, That we utter our earnest protest against said repeal and that we notify Senators Dick and Burton of our desire.

*Resolved*, That we favor a pure seed law.

*Resolved*, That we favor a more liberal appropriation in the cause of agriculture and strongly protest against the large appropriations being made for army and navy.

Respectfully submitted,

GEORGE CETONE,

R. Y. WHITE,

H. H. HANING,

Committee.

#### CONSERVATION AND DEVELOPMENT OF OHIO'S RESOURCES.

By Hon. W. O. Thompson, President Ohio State University.

Mr. President, Ladies and Gentlemen:—I appreciate the opportunity of speaking at this time or to read what little I have to say. For the second time this week the University has closed on account of the lack of coal, and I have an engagement between three or four o'clock to adjust matters. The stopping of a university that has two thousand students waiting to recite is no small thing, and I have been somewhat uneasy about conditions prevailing and that seem likely to prevail for some little time, and so you will pardon me if I withdraw from this meeting as soon as I can. I assure you it is not because my interest is not here.

I see I have not been given a topic and it is just as well.

Mr Sandles: Yes you have (handing Mr. Thompson a program).

Mr. Thompson: "Conservation and Development of Ohio's Resources." I offer no apology for presenting this theme, for just now it is apt to lead to the discussion of political issues and I assure you that I have no desire to do that sort of thing. But if there is any issue before us at this present day, it is, I think, the interest bound up sooner or later in the question of our own resources, their maintenance and preservation. The very violent discussion going on about the excessive cost of living is more nearly related than any other question to legislation. There are things that legislation can do and things that legislation cannot do; and we have been very slow to do some things legislation could do, and very eager to take hold of things that legislation cannot do. It is a relatively easy thing by legislation to do some things that have been persistently declined; and it is in the hope of setting forth briefly, as briefly as possible to be clear and not cloud the issue, what I regard the great moral issues, with some local applications to Ohio.

In these days it is easy to find fault with existing conditions; in fact that is always easy and usually as worthless as it is easy. Nevertheless we cannot be blind to the fact that much of our production has been characterized by wasteful methods and that we have been slow to correct our habits. It often happens that a legislature or a congress will attempt legislation on subjects and conditions where it is useless and neglect most important matters where science and statesmanship combine to point the duty. The failure of the congress of the United States to protect the forests of the Appalachian region after repeated testimony and urgent appeals serves to illustrate what I have just said, and also to show how difficult it is to get legislation up to the level of the intelligence of the majority of the people.

I propose today to present first a few facts as to the general situation in the country and then to bring the facts to bear upon the local condition in Ohio.

#### **The Agricultural Situation.**

It has been the custom for the present and the preceding generation to speak in most hopeful tones of our country as the world's great store house. The enthusiasm of the people has carried them on until the belief has been quite current that there was no limit to the possibilities of production. This hopeful attitude has engendered a sort of carelessness which, combined with the eager spirit of securing immediate results, has lead not only to careless production but an absolute robbery of the soil. For purposes of illustration, I select a few staple crops:

##### **Corn.**

First of all, statistics from 1866 show that while the area and the bushels have greatly increased, the yield per acre in 1866 was 25 3-10 bushels, and in 1907 25 9-10 bushels. The highest average since that date for any year was 30 8-10 bushels. The lowest average was 16 7-10 bushels. These were plainly exceptions and the general average has been rather steady, about 23 to 26 bushels. The average annual yield for these 42 years has been 24 9-10 bushels. This demonstrates beyond question the important fundamental truth that the only increase in the yield of corn worthy of mention has been the increase in acreage. In fact, there is not a bushel per acre variation in more than 40 years.

##### **Wheat.**

Wheat shows slightly better, but so little better as not to be of any great importance in view of the increased population. The area has increased about threefold. The report for 1866 shows an average yield of 9 9-10. It has never fallen below that figure since. In 1867 the yield was 11 6-10 bushels. The yield for 1907 was precisely 14 bushels. The average yield for these 42 years is 12 7-10 bushels.

##### **Cotton.**

Cotton, the great Southern staple, showed a yield in 1850 of nearly two and one-half million bales. In 1860, 5,387,000 bales. The crop for 1907 is estimated at 11,261,163 bales. The figures for the area are not available prior

to 1880, when it was 14,000,000 acres. In 1907 the area was 32,000,000 acres. Comparing the figures of 1880 with 1907, we find more than twice the area cultivated and a little less than twice the product. Taking the year 1900, the area was 25,000,000, and the product 10,000,000 bales. The statistics since that time show a pretty steady product.

#### Exports.

In the matter of export products it is interesting now to note that in 1898 we exported 208,000,000 bushels of corn. In 1907 we exported 83,000,000 bushels. The figures show in these 10 years a somewhat regular and steady decline in the amount of corn exported.

In wheat, we exported in 1898 148,000,000 bushels. In 1907, 76,000,000 bushels. Only once since 1898, namely in 1902, have we ever reached the amount exported in 1898. A somewhat well informed gentleman said to me not long since that within ten years we should be importing wheat.

The exports of manufactured cotton show in 1898 7,581,000 bales. In 1907, 8,708,000 bales. This export for the ten years has been somewhat steady with no very marked changes. Since the United States produces more than 70% of the world's cotton, it is readily recognized that cotton lands must increase in value and that the increase of population will quite promptly tax the ability of the limited area to meet the demand.

#### General Conclusions.

It is perfectly manifest from this statistical data that the production of this country in its most staple crops is not keeping pace with the general development of population. In the first place, the forty years behind us have surveyed practically every acre of tillable soil, and we are now pushing the cultivation into acres requiring irrigation. The cotton belt is a limited area which cannot be expanded. The profitable corn belt is practically a limited area comprising the central West. The wheat area, while more widespread, has for some years been dominated by the great Northwest. The important consideration for the man who is interested in the future of his country and the prosperity of his people is, that these acres cannot be increased. To attempt to push them to the borders is to invite men to live in most undesirable places under most adverse circumstances and to work with a very small margin of profit. Our problem, therefore, is the problem of increasing the output. It is the problem of such care, maintenance and development of the soil as will bring us the maximum product. The experience of forty years proves that the maximum products are not an accident but can be secured only by the application of the principles of science to the production of crops. The situation is now such that we may no longer assume that careless or haphazard methods of production are profitable. They may in favored years produce fair returns, but the possibilities are that such methods from year to year make a permanent depletion of the soil's power to produce and thus intensify the problem.

#### The Local Situation.

Ohio may be regarded as one of the representative states so far as the conservation of our resources is concerned. Here we have had large agricultural interests; we occupy a portion of the corn belt; we have been a great wheat producing state; we have had large cattle interests, and a diversified

agriculture. Rotation of crops has been fairly well followed in comparison with other agricultural states.

Sometime ago the director of the Experiment Station secured data from county officials for the decade from 1850 to 1859 inclusive, and from 1890 to 1899 inclusive. This was a stretch of forty years—practically a generation in agriculture. In that 40 years 34 counties showed an actual decrease in the yield of corn per acre. This decrease runs anywhere from .3 of a bushel up to 7.8 bushels decrease. The other 54 counties showed an increase varying from .1 (one-tenth) of a bushel to 10.8 bushels per acre. It is interesting to note that the largest area of decrease per acre is in the Miami valley, the Scioto valley, together with adjoining counties, and in certain of the counties of the northeastern part of the state along the lake shore. The largest increases per acre were found in what is known as the Black Swamp area of northwestern Ohio, and in certain of the counties where stock raising and dairy interests have flourished. It is easily believed that the increase in the Black Swamp region is due to the development of drainage and that this increase would not be maintained for another generation unless a further development of the drainage would sustain it. If improved methods of production follow the development of drainage, it is probable that the increased production would also continue in these counties. It is also probable that the development of the dairy industry in counties where city markets are available will also favorably affect the production per acre. In the region where there has been a decrease, notably along the Scioto valley and adjoining counties, two factors are probably recognized, first, that the character of the overflow in the river districts owing to the decrease in the amount of the timber land has greatly changed, and in recent years has damaged the soil by the washing of gravel, whereas in the earlier years when the current was less swift it improved the land by the deposit of silt. The second factor is that the hill counties have been farmed out and will probably remain permanently less productive unless very great change occurs in the method of crop production. A third factor might be added, namely, that in most of the favored portions I should say of the Scioto and Miami valleys the production of corn has remained practically stationary for large areas. On particular farms, where drainage and improved methods have obtained, men could testify as to the increase in the yield. The fact remains, however, that 34 counties show a decrease per acre.

#### Other Crops.

The figures are not at hand to make the same kind of a comparison as just given concerning corn. I am told by competent persons, however, that the showing for wheat and oats will probably be a little worse than for corn. This would be in the main in keeping with the statistics of the entire country. The percentage of the crop of wheat exported since 1867 reached its lowest point in 1905, namely, a little less than 8%; in 1907 it was nearly 20%. However, the highest point was reached in 1894 when it was 41.47%. The official government reports from 1867 to 1907 show an average export of 26.68% of the crop. For the last decade the average is 27.18%, and for the decade preceding this the average is 31.44%. In other words, the percentage of the wheat crop exported has been steadily declining for a generation. This means at once that the two staple crops of corn and wheat are soon to be completely consumed at home. The only way of deferring that time is to increase the product.



### The Problem.

The problem presented by these general conditions is entirely manifest. The price of these products cannot be materially lowered while present conditions obtain, and the figures all point to an increased demand and therefore a higher price. The range of prices will refer not simply to the products themselves but in general to all kinds of live stock where corn and the by-products are used as feed stuffs. All dairy products and all meats will have their prices sustained so long as the staple products of the farm are not keeping pace with the demand arising from increased population. But more serious than the question of price is the question of supply. When the United States reaches the point where staple crops cannot be exported we shall also have reached the point where very little, if any, meat or dairy products can be exported. Exports pay for imports. That period means decreased purchasing power in the foreign markets and must therefore bring in an era of higher prices or less ability to supply our wants. The national and rational protection against these tendencies is, of course, the development of production.

### Methods of Relief.

How shall this end be attained? In brief the reply would be a more intelligent production. This covers the wide range of rotation, maintenance of fertility, the application of science to all agricultural pursuits, the more careful selection of crops naturally adapted to the soil, and the development of the live stock industry. It has been said that it takes from three to four hundred years to bring soil to its highest state of productivity, and that the chief means to this end is the growing of live stock, so that nothing is taken off the farm except a finished product, and all forms of fertilization are saved to the soil. It is natural for a person in my position to say that education lies at the bottom of this problem. By this I do not mean necessarily the kind of education that is in our minds when we think of a school, but the kind of education that arouses every crop producer. It is entirely possible to have in every township a few successful farmers, but that is not sufficient to meet the larger issue. Farmers as a class, and in the totality, must be brought to the same kind of businesslike, practical intelligence as to farming that successful men in other lines of industry have developed.

Bearing upon this general problem of production is, of course, the question of conservation, especially as applied to our forests, our mines, our water supply, our gas, and everything else that contributes to the resources of the commonwealth or of the nation. Education of the present ought, and that of the future must, prepare a generation to appreciate the importance of all forms of industry. Agriculture will, of course, be for all time the foundation industry and the one most immediately related to the maintenance of the people. Here is where education has been the last resort; in the future it must be the primary consideration. The development of our country in population has quite outrun the development of our acreage. The amount of public land now available for ordinary agriculture is so small as to be practically negligible. The means of transportation are so abundant and so rapid as to practically wipe out the question of distance. All these problems, therefore, become national in their significance. Here in Ohio we have had an experiment station long enough to have reached a few established conclusions. Our education in agricultural matters has been wide enough to prove its value. Two things remain, namely, to accept for guidance the conclusions drawn from successful experimentation and

to widen the reach of influence of education. The proper use of such means must raise the very practical issue of our moral responsibility and integrity. The habit of wasteful or extravagant or reckless use of natural resources should be corrected and every generation should learn that such waste or extravagance is immoral both from its prodigality and from its lack of consideration of other people. There would seem to be every argument needed to urge men toward a rational life and an economic use of such natural resources as cannot be created, and of such others as can be reproduced only after long years of toil and of great expense. The fertility of the soil, the permanence of a sufficient area of wooded land, the continued serviceableness of our waterways, and the proper use of all these resources demand not only a higher grade of intelligence, but a sturdy moral quality in our citizenship.

#### REPORT OF COMMITTEE ON ACRE OF CORN CONTEST.

We, the undersigned committee, appointed by Governor Harmon to canvass the entries in the acre of corn contest inaugurated by the Ohio State Board of Agriculture, certify the results as follows:

1. B. B. Buck, Harlem Springs, Carroll County—122 bushels, 54 pounds, \$100.00.
2. Robert P. Cunningham, Gambier, Knox County—114 bushels, 27 pounds, \$80.00.
3. O. A. Dobbins, Cedarville, Greene County—111 bushels, 46 pounds, \$60.00.
4. F. E. Dobbins, Cedarville, Greene County—110 bushels, 48 pounds, \$50.00.
5. Oscar Zehring, Germantown, Montgomery County—87 bushels, 2 pounds, \$40.00.
6. George Ruhe, Ottawa, Putnam County—82 bushels, 33 pounds, \$30.00.
7. C. G. Wilson, Rockford, Mercer County—81 bushels, 23 pounds, \$20.00.
8. O. C. Chambers, Galena, Delaware County—74 bushels, 54 pounds, \$10.00.

[Signed]

FRANK PLESSINGER,  
H. B. JENKINS,  
E. F. COTTON,  
Committee.

**Twentieth Annual Report**

**OF**

**Farmers' Institutes**

**HELD IN OHIO IN**

**1909-1910**

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**UNDER THE AUSPICES OF THE**

**Ohio State Board of Agriculture**

( 605



## FINANCIAL STATEMENT:

The following statements show the receipts and disbursements of the Ohio State Board of Agriculture on account of farmers' institutes held in compliance with the provisions of Sections 3712-1 to 3713-6 of the Revised Statutes of Ohio:

### RECEIPTS.

Amount collected from the eighty-eight counties of the state under Section 3713-3 R. S. ----- \$11,000

### DISBURSEMENTS.

GAIL T. ABBOTT.		J. L. BUCHANAN.	
Railroad fare .....	\$15 35	Railroad fare .....	\$46 85
Bus and street car .....	55	Bus and street car .....	3 10
Hotel and meals .....	11 95	Livery .....	1 50
Incidentals .....	10	Hotel and meals .....	93 15
Total .....	\$27 95	Incidentals .....	80
		Salary .....	210 00
		Total .....	\$355 40
F. L. ALLEN.		M. O. BUGBY.	
Railroad fare .....	\$13 00	Railroad fare .....	\$21 90
Hotel and meals .....	6 00	Bus and street car .....	60
Salary .....	20 00	Hotel and meals .....	12 90
Total .....	\$39 00	Total .....	\$35 40
L. P. BAILEY.		MRS. M. O. BUGBY.	
Railroad fare .....	\$10 40	Railroad fare .....	\$3 10
Sleeper .....	3 00	Bus and street car .....	55
Bus and street car .....	30	Hotel and meals .....	2 50
Hotel and meals .....	9 25	Total .....	\$6 15
Salary .....	18 00		
Total .....	\$40 95	S. W. BURLINGAME.	
		Railroad fare .....	\$39 75
JOHN BEGG.		Bus and street car .....	1 75
Railroad fare .....	\$83 35	Livery .....	2 00
Sleeper .....	1 50	Hotel and meals .....	69 80
Bus and street car .....	3 75	Incidentals .....	56
Livery .....	2 50	Salary .....	140 00
Hotel and meals .....	118 25	Total .....	\$253 86
Incidentals .....	1 95		
Salary .....	384 00	W. I. CHAMBERLAIN.	
Total .....	\$595 30	Railroad fare .....	\$61 75
		Sleeper .....	7 50
FRANK BLACKFORD.		Bus and street car .....	2 60
Railroad fare .....	\$53 15	Livery .....	2 00
Bus and street car .....	4 85	Hotel and meals .....	88 15
Livery .....	3 50	Incidentals .....	1 15
Hotel and meals .....	88 20	Salary .....	253 00
Incidentals .....	3 79	Total .....	\$416 15
Salary .....	210 00		
Total .....	\$363 49	W. M. COOK.	
		Railroad fare .....	\$24 90
J. S. BRIGHAM.		Sleeper .....	4 50
Railroad fare .....	\$60 60	Bus and street car .....	1 25
Bus and street car .....	1 50	Hotel .....	20 70
Hotel and meals .....	100 85	Incidentals .....	50
Incidentals .....	75	Total .....	\$51 85
Salary .....	310 33		
Total .....	\$474 03		

## W. H. CULBERTSON.

Railroad fare .....	\$41 30
Bus and street car .....	1 25
Hotel and meals .....	81 60
Salary .....	160 00
Total .....	\$274 15

## J. P. DAVIS.

Railroad fare .....	\$61 50
Bus and street car .....	3 20
Livery .....	75
Hotel and meals .....	87 55
Incidentals .....	2 35
Salary .....	228 00
Total .....	\$383 35

## J. A. DRAKE.

Railroad fare .....	\$16 70
Bus and street car .....	95
Hotel and meals .....	25 80
Incidentals .....	1 90
Salary .....	60 00
Total .....	\$105 35

## W. G. FARNSWORTH.

Railroad fare .....	\$75 96
Bus and street car .....	75
Livery .....	3 50
Hotel and meals .....	107 58
Incidentals .....	10
Salary .....	336 00
Total .....	\$523 87

## J. F. GORDON.

Railroad fare .....	\$65 72
Sleeper .....	1 00
Bus and street car .....	2 05
Livery .....	4 00
Hotel and meals .....	114 35
Incidentals .....	35
Salary .....	264 00
Total .....	\$451 47

## JOHN GOULD.

Railroad fare .....	\$1 00
Hotel and meals .....	6 25
Salary .....	12 00
Total .....	\$19 25

## D. D. HARSH.

Railroad fare .....	\$33 90
Bus and street car .....	4 75
Livery .....	1 50
Hotel and meals .....	50 65
Incidentals .....	75
Salary .....	120 00
Total .....	\$211 55

## R. A. HAYNE.

Railroad fare .....	\$61 95
Bus and street car .....	1 10
Livery .....	5 50
Hotel and meals .....	59 00
Incidentals .....	2 50
Salary .....	185 00
Total .....	\$315 05

## H. D. HEMENWAY.

Railroad fare .....	\$28 70
Sleeper .....	5 00
Hotel .....	2 50
Total .....	\$36 20

## G. C. HOUSKEEPER.

Railroad fare .....	\$7 10
Hotel .....	7 60
Salary .....	20 00
Total .....	\$34 70

## J. A. HUMMON.

Railroad fare .....	\$5 75
Bus and street car .....	35
Hotel and meals .....	3 95
Salary .....	15 00
Total .....	\$25 05

## A. A. HUBER.

Railroad fare .....	\$29 90
Bus and street car .....	10
Livery .....	1 75
Hotel and meals .....	42 35
Incidentals .....	20
Salary .....	106 00
Total .....	\$180 30

## N. P. HULL.

Railroad fare .....	\$7 27
Bus and street car .....	50
Hotel and meals .....	11 75
Salary .....	40 00
Total .....	\$59 52

## SOLOMON JOHNSON.

Railroad fare .....	\$45 15
Bus and street car .....	50
Livery .....	1 50
Hotel and meals .....	72 70
Incidentals .....	1 30
Salary .....	170 00
Total .....	\$291 15

## A. H. JUDY.

Railroad fare .....	\$43 84
Bus and street car .....	1 75
Livery .....	75
Hotel and meals .....	90 60
Incidentals .....	1 80
Salary .....	187 00
Total .....	\$325 74

## GEO. L. LEAMING.

Railroad fare .....	\$10 70
Bus and street car .....	1 40
Livery .....	1 00
Hotel and meals .....	27 05
Incidentals .....	77
Salary .....	60 00
Total .....	\$100 92

## W. A. LLOYD.

Railroad fare .....	\$41 85
Bus and street car .....	95
Livery .....	11 50
Hotel and meals .....	49 85
Incidentals .....	2 55
Total .....	\$106 70
Less amount paid by Richmond Institute .....	11 25
Total .....	\$95 45

## THOS. F. MANNS.

Railroad fare .....	\$4 40
Hotel and meals .....	5 35
Total .....	\$9 75

## HORATIO MARKLEY.

Railroad fare .....	\$40 35
Bus and street car .....	1 40
Livery .....	3 50
Hotel and meals .....	69 70
Incidentals .....	85
Salary .....	180 00
Total .....	\$295 80

## E. C. MARTINDALE.

Railroad fare .....	\$18 95
Bus and street car .....	55
Hotel and meals .....	20 15
Incidentals .....	80
Salary .....	66 00
Total .....	\$106 55

## CARY W. MONTGOMERY.

Railroad fare .....	\$29 12
Bus and street car .....	95
Livery .....	2 00
Hotel and meals .....	59 40
Salary .....	164 00
Total .....	\$245 47

## S. W. MOORE.

Railroad fare .....	\$62 70
Sleeper .....	5 00
Bus and street car .....	3 55
Livery .....	5 75
Hotel and meals .....	95 85
Incidentals .....	1 30
Salary .....	316 67
Total .....	\$490 82

## J. W. NICODEMUS.

Railroad fare .....	\$50 00
Bus and street car .....	50
Livery .....	2 00
Hotel and meals .....	69 30
Incidentals .....	20
Salary .....	180 00
Total .....	\$302 00

## W. PADDOCK.

Railroad fare .....	\$5 70
Sleeper .....	1 25
Bus and street car .....	25
Hotel and meals .....	3 00
Total .....	\$10 20

## CHAS. H. RICH.

Railroad fare .....	\$22 15
Bus and street car .....	1 20
Livery .....	1 00
Hotel and meals .....	16 85
Salary .....	35 00
Total .....	\$76 20

## LOWELL ROUDEBUSH.

Railroad fare .....	\$18 70
Bus and street car .....	80
Hotel and meals .....	46 30
Incidentals .....	25
Salary .....	132 00
Total .....	\$198 05

## GEO. E. SCOTT.

Railroad fare .....	\$39 85
Bus and street car .....	2 40
Chair car .....	50
Hotel and meals .....	78 55
Incidentals .....	1 44
Salary .....	132 00
Total .....	\$252 74

## N. E. SHAW.

Railroad fare .....	\$34 90
Sleeper .....	1 75
Bus and street car .....	2 60
Livery .....	3 75
Incidentals .....	35
Hotel and meals .....	29 05
Total .....	\$72 40

## AUG. STABLER.

Railroad fare .....	\$35 35
Sleeper .....	5 00
Bus and street car .....	80
Livery .....	5 00
Hotel and meals .....	57 80
Incidentals .....	1 22
Salary .....	200 00
Total .....	\$305 17

## L. G. SPENCER.

Railroad fare .....	\$26 15
Bus and street car .....	40
Livery .....	50
Hotel and meals .....	55 15
Incidentals .....	40
Salary .....	150 00
Total .....	\$232 60

## S. E. STRODE.

Railroad fare .....	\$62 45
Chair car .....	55
Bus and street car .....	1 55
Livery .....	1 50
Hotel and meals .....	92 30
Incidentals .....	95
Salary .....	270 00
Total .....	\$429 30

## L. J. TABER.

Railroad fare .....	\$13 95
Bus and street car .....	65
Livery .....	1 50
Hotel and meals .....	18 20
Incidentals .....	1 20
Salary .....	60 00
Total .....	\$95 50

## M. C. THOMAS.

Railroad fare .....	\$29 27
Bus and street car .....	1 30
Hotel and meals .....	78 45
Incidentals .....	40
Salary .....	140 00
Total .....	\$249 42

## CHAS. E. THORNE.

Railroad fare .....	\$8 25
Sleeper .....	1 50
Bus and street car .....	25
Hotel and meals .....	1 50
Total .....	\$11 50

## C. R. WAGNER.

Railroad fare .....	\$82 40
Sleeper .....	1 75
Bus and street car .....	7 55
Livery .....	17 00
Hotel and meals .....	179 95
Incidentals .....	8 92
Salary .....	375 66

Total ..... \$673 23

## RUTH A. WARDALL.

Railroad fare .....	\$5 55
Hotel and meals .....	1 30
Salary .....	5 00

Total ..... \$11 85

## J. R. WELLS.

Railroad fare .....	\$25 31
Sleeper .....	1 25
Bus and street car .....	25
Livery .....	8 50
Hotel and meals .....	32 95
Incidentals .....	1 68
Salary .....	65 00

Total ..... \$134 92

## C. G. WILLIAMS.

Railroad fare .....	\$5 00
Chair car .....	50
Bus and street car .....	1 50
Hotel and meals .....	3 40
Incidentals .....	75

Total ..... \$11 15

## W. D. ZINN.

Railroad fare .....	\$69 45
Sleeper .....	4 05
Bus and street car .....	3 40
Hotel and meals .....	62 75
Incidentals .....	80
Salary .....	135 00

Total ..... \$275 45

## CHARLES McINTIRE.

Railroad fare .....	\$72 92
Sleeper .....	1 90
Bus and street car .....	2 65
Hotel and meals .....	152 75
Incidentals .....	1 00
Salary .....	372 00

Total ..... \$603 22

Total expenses and salaries of lecturers.....	\$11,185 89
Expense of E. J. Filbin, chief clerk, advertising, etc.....	84 45
Southern Hotel, six dinners for lecturers.....	4 50
Angelus Quartette, services at State Farmers' Institute.....	25 00
E. M. Steen, operating stereopticon machine for lectures at State Farmers' Institute.....	8 00
Merwine & Moore, stenographic report of State Farmers' Institute.....	87 85
J. A. Beidler, telegrams on account of Cleveland meeting.....	10 18
Total.....	\$11,405 87



FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910.

NOTE.—The institute law, as amended by the General Assembly, March 31, 1906, provides for four institutes in each county, and not to exceed thirty-one dollars and twenty-five cents for the expenses of each, but requests must be filed with the State Board of Agriculture before September 1st of each year for such institutes. All societies should be properly organized before asking for the assignment of an institute.

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Covered by Allowance as per Amended Institute Law.
	Where.	When.		
Adams .....	Wamsley .....	December 10-11 .....	50	\$31 25
	West Union .....	Dec. 30-Jan. 1 .....	150	31 25
	Peebles .....	Jan. 31, Feb. 1 .....	375	30 00
	Winchester .....	February 11-12 .....	63	29 50
Allen .....	Beaver Dam .....	December 27-28 .....	315	31 00
	Lafayette .....	January 5-6 .....	200	29 50
	Bluffton .....	February 9-10 .....	375	31 25
	Delphos .....	February 14-15 .....	490	31 25
Ashland .....	Jeromeville .....	December 27-28 .....	278	31 25
	Nova .....	January 31, Feb. 1 .....	450	29 00
	Loudonville .....	February 16-17 .....	125	31 25
	Polk .....	February 18-19 .....	280	30 80
Ashtabula .....	Williamsfield .....	December 13-14 .....	100	10 98
	Orwell .....	December 27-28 .....	150	31 25
	Pierpont .....	February 7-8 .....	300	29 25
	Geneva .....	March 2-3 .....	130	27 27
Athens .....	Coolville .....	December 10-11 .....	212	29 00
	Albany .....	December 27-28 .....	150	27 65
	Athens .....	January 28-29 .....	550	31 25
	Auglaize .....	December 29-30 .....	225	31 25
Belmont .....	Cridersville .....	December 29-30 .....	225	31 25
	Waynesfield .....	January 3-4 .....	300	28 50
	New Bremen .....	February 7-8 .....	132	31 25
	Buckland .....	February 23-24 .....	217	31 25
Brown .....	Barnesville .....	December 20-21 .....	160	31 25
	Loydsville .....	December 27-28 .....	250	31 25
	Colerain .....	January 17-18 .....	145	31 25
	Morristown .....	Jan. 31, Feb. 1 .....	275	31 25
Butler .....	Sardinia .....	December 10-11 .....	400	31 25
	Mount Orab .....	December 20-21 .....	70	31 25
	Russellville .....	December 29-30 .....	100	30 40
	Fayetteville .....	February 2-3 .....	300	31 25
Carroll .....	Monroe .....	December 29-30 .....	225	28 98
	Oxford .....	January 5-6 .....	175	31 25
	Seven Mile .....	Jan. 31, Feb. 1 .....	220	31 25
	Malvern .....	December 10-11 .....	187	31 25
Champaign .....	Carrollton .....	January 3-4 .....	100	25 40
	Magnolia .....	January 17-18 .....	166	31 25
	Sherodsville .....	February 21-22 .....	337	19 24
	Kingscreek .....	December 27-28 .....	123	31 25
Mingo .....	Magraw .....	January 19-20 .....	300	31 25
	Woodstock .....	January 26-27 .....	220	31 25
	Mingo .....	February 7-8 .....	200	31 25

FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910—Continued.

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Covered by Allowance, as per Amended Institute Law.
	Where.	When.		
Clark.....	Donnelsville.....	December 13-14.....	202	\$31 25
	Catawba.....	January 17-18.....	175	31 25
	Pitchin.....	January 24-25.....	208	31 25
	Tremont City.....	February 16-17.....	150	31 16
Clermont.....	Amelia.....	December 20-21.....	150	.....
	Laredo.....	December 27-28.....	250	31 25
	Milford.....	January 3-4.....	296	31 25
	Felicity.....	February 4-5.....	320	31 25
Clinton.....	Sabina.....	December 13-14.....	258	31 25
	New Vienna.....	December 17-18.....	370	31 25
	Clarksville.....	January 3-4.....	279	31 25
	Blanchester.....	Jan. 31, Feb. 1.....	350	31 25
Columbiana.....	Damascus.....	January 5-6.....	550	31 25
	Rogers.....	January 21-22.....	300	31 25
	East Palestine.....	January 28-29.....	300	31 25
	Lisbon.....	February 18-19.....	.....	31 25
Coshocton.....	Bakersville.....	December 17-18.....	197	30 40
	Keene.....	December 27-28.....	260	17 63
	Nellie.....	January 17-18.....	105	29 95
	Walhonding.....	February 11-12.....	200	27 60
Crawford.....	Crestline.....	December 22-23.....	450	31 25
	Tiro.....	January 3-4.....	400	31 25
	Bucyrus.....	February 7-8.....	600	31 25
	Strongsville.....	December 15-16.....	300	31 25
Cuyahoga.....	Warrensville.....	December 27-28.....	120	31 25
	Dover.....	January 7-8.....	200	30 85
	Brecksville.....	February 18-19.....	225	31 25
	North Star.....	December 29-30.....	450	31 25
Darke.....	Palestine.....	February 4-5.....	260	31 25
	Arcanum.....	February 11-12.....	800	31 25
	Beamsville.....	February 18-19.....	175	31 20
	Farmer.....	December 20-21.....	115	25 75
Defiance.....	Hicksville.....	January 7-8.....	270	31 25
	Sherwood.....	January 28-29.....	475	31 25
	Sunbury.....	January 5-6.....	250	31 25
	Delaware.....	January 28-29.....	450	31 25
Erie.....	Milan.....	Dec. 31-Jan. 1.....	208	31 25
	Berlin Heights.....	January 21-22.....	183	31 25
	Castalia.....	February 4-5.....	265	31 25
	Amanda.....	January 19-20.....	167	25 25
Fairfield.....	Pleasantville.....	January 24-25.....	400	31 25
	Baltimore.....	January 28-29.....	335	31 25
	Bremen.....	February 9-10.....	420	31 25
	Moons.....	December 13-14.....	250	31 25
Fayette.....	Jeffersonville.....	January 5-6.....	360	31 25
	Good Hope.....	January 21-22.....	500	31 25
	Groveport.....	December 10-11.....	100	31 25
	Westerville.....	January 5-6.....	175	31 25
Franklin.....	Hilliard.....	January 7-8.....	210	31 25
	Pleasant Corners.....	February 7-8.....	270	31 25

FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910—Continued.

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Covered by Allowance, as per Amended Institute Law.
	Where.	When.		
Fulton.....	Swanton.....	January 26-27.....	300	\$28 02
	Fayette.....	January 28-29.....	450	31 25
	Delta.....	Jan. 31-Feb. 1.....	425	31 25
	Lyons.....	February 21-22.....	500	10 00
Gallia.....	Gallia.....	December 10-11.....	90	16 00
	(Bethel Church)			
	Bidwell.....	December 20-21.....	325	31 25
	Cheshire.....	December 22-23.....	200	31 20
Geauga.....	Gallipolis.....	February 2-3.....	200	31 25
	(Mt. Zion Church)			
	Thompson.....	December 10-11.....	285	31 25
	Huntsburg.....	January 3-4.....	160	15 00
Greene.....	Burton.....	January 24-25.....	200	27 70
	Chardon.....	February 9-10.....	150	26 45
	Bellbrook.....	December 15-16.....	300	31 25
	Cedarville.....	December 22-23.....	120	31 25
Guernsey.....	Clifton.....	January 17-18.....	200	31 25
	Jamestown.....	February 14-15.....	463	31 25
	Byesville.....	December 17-18.....	193	31 25
	Fairview.....	December 29-30.....	150	31 25
Hamilton.....	Cumberland.....	January 7-8.....	217	31 25
	Antrim.....	January 24-25.....	385	31 25
	Springdale.....	Dec. 31-Jan. 1.....	150	31 25
	Harrison.....	January 17-18.....	250	31 25
Hancock.....	Newtown.....	February 4-5.....	210	31 25
	Blue Ash.....	February 7-8.....	210	31 25
	Vanlue.....	December 22-23.....	150	31 25
	Arlington.....	January 10-11.....	365	31 25
Hardin.....	Benton Ridge.....	February 2-3.....	375	31 25
	McComb.....	February 16-17.....	405	31 25
	Forest.....	December 27-28.....	366	31 25
	Kenton.....	January 3-4.....	375	31 25
Harrison.....	Ada.....	January 24-25.....	533	31 25
	Mt. Victory.....	Jan. 31-Feb. 1.....	379	31 25
	Deersville.....	Dec. 31-Jan. 1.....	200	18 20
	Jewett.....	January 7-8.....	155	28 50
Henry.....	Scio (Mt. Hope).....	January 19-20.....	125	26 30
	Freeport.....	February 7-8.....	300	31 25
	Liberty Center.....	January 17-18.....	325	31 25
	Hamler.....	January 19-20.....	197	31 00
Highland.....	Grelton.....	February 7-8.....	371	31 25
	Florida.....	February 16-17.....	325	31 25
	Rainsboro.....	January 19-20.....	315	31 25
	Lynchburg.....	January 28-29.....	245	31 25
Hocking.....	Mowrystown.....	February 4-5.....	450	31 25
	Hillsboro.....	February 9-10.....	445	31 25
	Logan.....	December 17-18.....	182	10 00
	Laurelville.....	December 29-30.....	175	31 25
Holmes.....	Killbuck.....	December 10-11.....	180	31 25
	Holmesville.....	February 9-10.....	215	31 25

**FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910—Continued.**

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Covered by Allowance, as per Amended Institute Law.
	Where.	When.		
Huron.....	Greenwich.....	December 29-30.....	247	\$31 25
	Olena.....	January 19-20.....	215	31 25
	Townsend.....	February.....	315	27 87
	Wakeman.....	February 14-15.....	200	31 25
Jackson.....	Wellston.....	December 13-14.....	65	31 25
	Rocky Hill.....	December 17-18.....	150	25 55
	Jackson.....	Jan. 31-Feb. 1.....	225	31 25
	(4 Mile Church)			
Jefferson.....	Glade.....	February 7-8.....	250	31 25
	Bloomington.....	January 19-20.....	300	31 25
	Smithfield.....	January 21-22.....	316	31 25
	Richmond.....	January 28-29.....	575	31 25
Knox.....	Mt. Pleasant.....	February 25-26.....	400	31 25
	Brandon.....	December 13-14.....	225	31 25
	Danville.....	January 7-8.....	250	31 25
	Esto.....	February 9-10.....	225	31 25
Lake.....	Fredericktown.....	February 11-12.....	280	31 25
	Painesville.....	December 29-30.....	125	31 25
	Perry.....	January 5-6.....	150	31 25
	Proctorville.....	December 15-16.....	45	18 56
Lawrence.....	Hanging Rock.....	December 20-21.....	175	31 25
	Waterloo.....	December 27-28.....	200	23 75
	Chesapeake.....	February 4-5.....	40	14 83
	(Big Branch).			
Licking.....	Kirkersville.....	January 7-8.....	200	31 25
	Utica.....	January 28-29.....	285	30 95
	Johnstown.....	February 2-3.....	375	31 25
	Brownsville.....	February 11-12.....	175	31 25
Logan.....	Bellefontaine.....	January 7-8.....	250	31 25
	East Liberty.....	January 28-29.....	310	31 25
	Degraff.....	February 2-3.....	350	31 25
	Belle Center.....	February 7-8.....	500	31 25
Lorain.....	Brownhelm.....	December 17-18.....	205	17 00
	Rochester.....	January 17-18.....	300	31 25
	North Ridgeville.....	January 26-27.....	160	31 25
	Grafton.....	February 16-17.....	195	31 25
Lucas.....	Waterville.....	January 19-20.....	125	31 25
	Berkey.....	January 26-27.....	180	31 25
	Monclova.....	February 2-3.....	125	31 25
	Richfield Center.....	February 14-15.....	214	31 25
Madison.....	West Jefferson.....	December 17-16.....	120	31 25
	Plain City.....	January 5-6.....	125	31 25
	Mt. Sterling.....	January 19-20.....	350	27 65
	London.....	January 24-25.....	275	31 25
Mahoning.....	Berlin Center.....	January 24-25.....	300	31 25
	North Lima.....	February 18-19.....	150	31 25
	Canfield.....	February 23-24.....	175	31 25
	North Jackson.....	February 25-26.....	200	31 25

**FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910—Continued.**

Counties.	Institutes Held.		Average Attendance reported Each Session.	Local Expenses Covered by Allowance, as per Amended Institute Law.
	Where.	When.		
Marion.....	Waldo.....	December 17-18.....	130	\$25 84
	Caledonia.....	December 29-30.....	235	29 06
	Agosta.....	January 26-27.....	254	30 09
Medina.....	Marion.....	February 23-24.....	115	31 15
	Chatham.....	January 17-18.....	275	31 25
	Hinckley Center.....	January 17-18.....	185	26 82
	Seville.....	January 24-25.....	359	30 65
Meigs.....	Poe.....	February 9-10.....	200	31 25
	Chester.....	December 17-18.....	220	22 00
	Tupper's Plains.....	December 22-23.....	200	31 10
	Dyesville.....	Jan. 31-Feb. 1.....	250	30 50
Mercer.....	Racine.....	February 14-15.....	400	26 45
	Coldwater.....	February 9-10.....	275	31 25
	Fort Recovery.....	February 16-17.....	305	31 25
	Neptune.....	February 25-26.....	250	20 07
Miami.....	Bethel.....	January 21-22.....	150	31 25
	(High School)			
	Casstown.....	January 26-27.....	275	31 25
	West Milton.....	February 2-3.....	500	31 25
Monroe.....	Bradford.....	February 18-19.....	296	31 25
	Woodsfield.....	December 22-23.....	150	28 82
	Beallsville.....	January 3-4.....	202	31 25
Montgomery.....	Trotwood.....	January 24-25.....	300	31 25
	Farmersville.....	Jan. 31-Feb. 1.....	500	31 25
	Vandalia.....	February 21-22.....	225	31 25
	Centerville.....	March 4-5.....	400	31 25
Morgan.....	Cloud.....	December 20-21.....	250	28 00
	Mountville.....	December 22-23.....	175	20 00
	Neelyville.....	February 4-5.....	200	31 25
	Reinersville.....	February 7-8.....	425	22 29
Morrow.....	Mt. Gilead.....	December 15-16.....	200	31 25
	Chesterville.....	January 5-6.....	141	26 75
	Iberia.....	February 4-5.....	175	26 00
	Johnsville.....	February 16-17.....	240	31 25
Muskingum.....	White Cottage.....	Dec. 31-Jan. 1.....	360	31 25
	Norwich.....	January 26-27.....	175	31 25
	Adamsville.....	Jan. 31-Feb. 1.....	350	31 25
	Philo.....	February 9-10.....	204	29 08
Noble.....	Summerfield.....	December 13-14.....	75	31 25
	Renrock.....	February 2-3.....	125	25 85
	Sharon.....	February 25-26.....	208	24 25
	Dexter City.....	February 18-19.....	130	27 75
Ottawa.....	Port Clinton.....	February 4-5.....	250	26 00
	Oak Harbor.....	February 16-17.....	222	31 25
	Elmore.....	February 23-24.....	160	30 00
Paulding.....	Antwerp.....	January 17-18.....	200	31 25
	Oakwood.....	Jan. 31-Feb. 1.....	460	31 25
	Payne.....	February 9-10.....	275	20 00
	Haviland.....	February 14-15.....	400	31 25

FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910—Continued.

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Covered by Allowance, as per Amended Institute Law.
	Where.	When.		
Perry.....	Sayre.....	December 22-23.....	129	\$31 25
	Rehoboth.....	December 27-28.....	184	31 25
	Unity.....	January 26-27.....	140	31 25
	Glenford.....	February 11-12.....	200	31 25
Pickaway.....	Derby.....	January 7-8.....	217	31 25
	Tarleton.....	January 21-22.....	100	31 25
	Williamsport.....	January 21-22.....	250	31 25
Pike.....	Stockdale.....	December 15-16.....	244	31 25
	Camp.....	January 24-25.....	180	31 25
	Piketon.....	January 26-27.....	150	31 25
	Latham.....	February 11-12.....	250	31 25
Portage.....	Kent.....	Dec. 31-Jan. 1.....	225	30 63
	Windham.....	January 19-20.....	225	2 00
	Ravenna.....	January 21-22.....	122	24 71
	Atwater.....	Feb. 28-March 1.....	183	24 96
Preble.....	West Manchester.....	December 22-23.....	175	31 25
	Eldorado.....	Dec. 31-Jan. 1.....	375	31 25
	Camden.....	January 7-8.....	200	31 25
	New Paris.....	February 23-24.....	350	31 25
Putnam.....	Kalida.....	January 7-8.....	300	26 87
	Continental.....	January 21-22.....	350	31 25
	Columbus Grove.....	February 11-12.....	...	31 25
	Fort Jennings.....	February 18-19.....	380	23 40
Richland.....	Lucas.....	February 14-15.....	370	29 55
	Bellville.....	February 21-22.....	275	30 00
	Adario.....	February 21-22.....	...	31 25
	Shelby.....	February 17.....	...	31 25
Ross.....	South Salem.....	December 15-16.....	235	31 25
	Bainbridge.....	Dec. 31-Jan. 1.....	122	31 25
	Frankfort.....	January 26-27.....	225	31 25
Sandusky.....	Fremont.....	January 3-4.....	800	31 25
	Clyde.....	January 21-22.....	450	22 50
	Lindsey.....	February 11-12.....	265	19 80
	Bellevue.....	February 18-19.....	175	27 35
Scioto.....	Lucasville.....	December 13-14.....	50	31 25
	Mount Joy.....	December 29-30.....	125	5 09
	Haverhill.....	Dec. 31-Jan. 1.....	150	31 25
	Scioto.....	February 9-10.....	245	31 25
Seneca.....	Attica.....	December 20-21.....	250	31 25
	Fostoria.....	January 17-18.....	450	31 25
	Tiffin.....	January 21-22.....	500	31 25
	Greenspring.....	February 9-10.....	400	31 25
Shelby.....	Pemberton.....	Dec. 31-Jan. 1.....	250	31 25
	Sidney.....	February 4-5.....	320	31 25
	Jackson Center.....	February 21-22.....	300	31 25
Stark.....	Beach City.....	January 24-25.....	207	31 25
	Marlboro.....	February 16-17.....	200	31 25
	Osnaburg.....	February 23-24.....	230	31 25

FARMERS' INSTITUTES HELD IN OHIO DURING SEASON BEGINNING  
DECEMBER 10, 1909, AND ENDING MARCH 3, 1910—Concluded.

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Covered by Allowance, as per Amended Institute Law.
	Where.	When.		
Summit.....	Clinton.....	Dec. 31-Jan. 1.....	200	\$31 25
	Copley Center.....	January 19-20.....	350	31 25
	West Richfield.....	January 26-27.....	215	31 25
Trumbull.....	North Springfield....	February 11-12.....	300	31 25
	Burghill.....	December 29-30.....	55	19 00
	Newton Falls.....	Dec. 31-Jan. 1.....	312	31 25
Tuscarawas.....	Hubbard.....	January 21-22.....	75	30 95
	Mesopotomia.....	February 21-22.....	150	31 25
	Winfield.....	December 15-16.....	210	31 25
Union.....	New Philadelphia....	December 29-30.....	100	31 25
	Port Washington.....	January 28-29.....	228	31 23
	Sugar Creek.....	February 14-15.....	372	31 25
Van Wert.....	Richwood.....	Dec. 31-Jan. 1.....	250	31 25
	Milford Center.....	January 3-4.....	125	31 25
	York.....	February 25-26.....	305	31 25
Vinton.....	Venedocia.....	February 2-3.....	450	30 93
	Convoy.....	February 11-12.....	300	31 25
	Van Wert.....	February 14-15.....	170	31 25
Warren.....	Wilkesville.....	December 15-16.....	130	25 54
	New Plymouth.....	December 20-21.....	300	31 25
	Waynesville.....	December 17-18.....	440	31 25
Washington.....	Morrow.....	January 3-4.....	300	31 25
	Mason.....	February 2-3.....	400	31 25
	Elba.....	December 15-16.....	300	31 25
Wayne.....	Watertown.....	February 2-3.....	300	31 25
	Lowell.....	February 4-5.....	300	31 25
	Bartlett.....	February 16-17.....	370	31 25
Williams.....	Wooster.....	December 20-21.....	700	31 25
	Shreve.....	December 29-30.....	300	31 25
	Creston.....	January 26-27.....	300	31 25
Wood.....	Orrville.....	February 7-8.....	700	27 95
	Montpelier.....	January 24-25.....	480	31 25
	Edgerton.....	February 4-5.....	400	31 25
Wyandot.....	West Unity.....	February 18-19.....	350	31 25
	Bloomdale.....	December 22-23.....	267	31 25
	Tontogany.....	January 5-6.....	125	12 57
Totals.....	Prairie Depot.....	January 19-20.....	500	31 25
	Perrysburg.....	February 21-22.....	450	31 25
	Upper Sandusky.....	December 27-28.....	575	31 25
	Nevada.....	February 14-15.....	200	31 25
	Sycamore.....	February 25-26.....	500	31 25
Totals.....			84,204	\$9,536 76

## INDEPENDENT INSTITUTES.

Counties.	Institutes Held.		Average Attendance Reported Each Session.	Local Expenses Reported by Secretary.
	Where.	When.		
Auglaize.....	New Knoxville.....	Dec. 31-Jan. 1.....	275	\$166 52
Belmont.....	St. Clairsville.....	December 29-30.....	300	220 00
Champaign.....	Mechanicsburg.....	February 9-10.....	200	51 80
Clermont.....	New Richmond.....	December 9-10.....		
	Bethel.....	January 28-29.....	180	49 15
Coshocton.....	Perry Grange Hall...	February 4-5.....	238	28 54
Cuyahoga.....	Olmsted Falls.....		204	
	North Royalton.....	February 22-23.....	180	39 88
Darke.....	New Madison.....	February 7-8.....	500	66 73
Delaware.....	Ostrander.....	March 3.....	320	18 00
Fairfield.....	Carroll.....	March 4-5.....	300	50 00
Geauga.....	Middlefield.....	January 20-21.....	150	27 90
Greene.....	Yellow Springs.....	February 22-23.....	550	81 00
Hancock.....	Rawson.....	January 12-13.....	275	35 00
	Mt. Cory.....	February 18-19.....	180	33 00
	Van Buren.....	February 22-23.....		45 00
Harrison.....	Georgetown.....	November 28.....	175	60 75
	Hanover.....	February 25.....	155	
	New Rumley.....	March 25.....	223	
Henry.....	Deshler.....	March 2-3.....	175	49 00
Highland.....	Leesburg.....	February 4-5.....	400	58 00
Huron.....	North Fairfield.....	February 21-22.....	325	33 60
Knox.....	Centerburg.....	January 17-18.....	200	45 55
Logan.....	Zanesfield.....	January 27-28.....	200	20 00
Lorain.....	Kipton.....	February 22-23.....	400	
	Columbia Center.....	February 2-3.....	270	41 00
	Brighton.....	February 15-16.....	154	25 00
Medina.....	Brunswick.....	February 9-10.....	225	29 52
	Litchfield.....	January 12-13.....	225	
	Granger.....	December 27-28.....	100	18 00
	Sharon Center.....	January 26-27.....	180	55 00
Mercer.....	Wabash.....		280	37 16
	St. Henry.....	March 18.....	275	
Montgomery.....	Brookville.....	January 19-20.....	250	50 00
Morgan.....	Chesterhill.....	February 18-19.....	500	
	Pleasant Valley.....	December 3-4.....	250	60 00
Muskingum.....	Chandlersville.....	February 14-15.....	250	45 49
Preble.....	Eaton.....	February 7-8-9.....	300	50 00
	Lewisburg.....	February 23-24.....	462	44 90
Putnam.....	Ottawa.....	December 17-18.....	250	150 00
	Millers City.....	February 23-24.....		55 72
	Pandora.....	January 27-28.....		30 50
	Ottawa River Church	February 25-26.....	315	
Seneca.....	Bloomville.....	February 21-22.....	250	10 00
Summit.....	Cuyahoga Falls.....	January 20-21.....	325	400 00
	Manchester.....	January 28-29.....	440	47 43
	Tallmadge.....	February 25.....	300	15 00
Trumbull.....	Lordstown Center...	February 21-22.....	173	10 00
Wayne.....	Congress.....	February 11-12.....	250	13 41
Williams.....	Stryker.....	February 25-26.....	226	18 10
Wood.....	Grand Rapids.....	January 21-22.....	310	35 00
Totals.....			12,705	\$2,420 63



**Ohio Department of Agriculture**

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**Division of Nursery  
and Orchard Inspection**

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**Eighth Annual Report  
of the Chief Inspector**

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**1909**

(619)

Columbus, December 31, 1909.

TO HON. JUDSON HARMON, *Governor of Ohio*:

SIR:—In accordance with law, report of nursery and orchard inspection for the year 1909 is herewith submitted. Same contains full history of the work done along lines of investigation and inspection, showing the places where inspection has been made and where diseased stock has been found and treated.

Respectfully submitted,

OHIO STATE BOARD OF AGRICULTURE,

A. P. SANDLES, *Secretary*.

**EXPENDITURES OF DIVISION OF NURSERY AND ORCHARD INSPECTION**  
**FROM JANUARY 1 TO DECEMBER 31, 1909.**

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Salary of N. E. Shaw, Chief Inspector, 12 months-----	\$1,766 67
Salary of H. J. Speaker, Deputy Inspector, 9¼ months-----	695 00
Salary of William E. Evans, Jr., Deputy Inspector, 12 months-----	900 00
Salary of E. W. Mendenhall, Deputy Inspector, 12 months-----	855 00
Salary of F. D. Heckathorn, Deputy Inspector, 12 months-----	855 00
Salary of F. N. Fagan, Deputy Inspector, 2¾ months-----	170 00
Salary of H. D. Leach, Deputy Inspector, 6 1-3 months-----	380 00
Salary of R. S. McKay, Deputy Inspector, 6 1-3 months-----	378 00
Salary of Ora Ayres, Stenographer and Clerk, 12 months-----	675 00
Expense of N. E. Shaw-----	410 25
Expense of H. J. Speaker-----	981 12
Expense of William E. Evans, Jr.-----	673 47
Expense of E. W. Mendenhall-----	1,127 40
Expense of F. D. Heckathorn-----	954 75
Expense of F. N. Fagan-----	288 14
Expense of R. S. McKay-----	570 10
Expense of H. D. Leach-----	497 14
General expense, office supplies, etc-----	196 62
<hr/>	
Total -----	\$12,373 66
Receipts from inspection of nurseries filing applications after July 1--	\$59 20

would eradicate the pest. This is mentioned as an example of the good that could be accomplished if our powers were extended to include the control of such pests.

The presence of the winter webs of the brown tail moth on imported nursery stock from Europe, received during the present year, has made necessary the inspection of foreign stock on its arrival in Ohio. This means additional duties for the inspection force, but the great danger attending the presence of this pest will warrant us giving our entire attention to the examination of these shipments during their arrival.

Repeated evidence of the receipt of infested stock from other states makes necessary, for the protection of our growers, the inspection of this stock on its arrival in Ohio, especially when coming from sources which have been repeated offenders. Several hundred agents and dealers are operating in Ohio for outside nursery establishments, and the amount of stock which is thus scattered about the state is enormous. Much of this, of course, is in good condition and free from pests, but our orchard inspection work has shown that very frequently infested stock is received in this manner. It seems advisable, therefore, that transportation companies should be required to notify this office of the arrival and destination of all shipments of nursery stock entering the state, in order that undesirable stock might be rejected. Too much stress cannot be laid upon this subject. While large amounts of Ohio-grown stock are sold in Ohio, possibly two-thirds of that produced goes to other states, and as the greater portion of our time is spent in inspecting nursery stock, the majority of the benefits of such inspection do not fall to Ohio growers. It is imperative, therefore, that it be made possible whereby closer attention can be given to nursery stock entering the state.

Several states include in their inspection law the examination of apiaries for bee diseases and other pests. There is a law on the Ohio statute books which makes provision for this work, but it is of no value under the present arrangement. The production of honey in the state has, for the last five years, steadily decreased by several tons annually. Thousands of colonies are being destroyed by foul brood, which, under a careful system of inspection and an application of suitable remedies, could be prevented. The rightful place for all work of this nature is with this Division and with a proper encouragement of intelligent bee culture, the industry would be greatly benefited. The business is too closely related to horticulture to be neglected.

It appears, at last, to be dawning upon the owners of small orchards that something must be done in the way of treatment if any desirable fruit is to be available for family use. The commercial orchardist is on the alert for any pest which may hinder the proper development of his product and needs but little assistance from this Division; but the man whose time and thought are largely given to other work has expected his

orchard to take care of itself, and he is beginning to realize that but little returns are being received. By inspection, talks and demonstrations in pruning and spraying, we have endeavored to encourage better care of the small orchard. It is impossible under present conditions for us to cover very much territory at that period of the year when this work should be done.

To perform this work successfully, and for the best interests of the farmer and fruit grower, there should be available in each county, or group of counties, of the state, an inspector, who should be a practical horticulturist, and who, under the direction of this Division, could give demonstrations and examples in the proper manner of orchard management; who could examine on arrival shipments of nursery stock from other states; and who would be available for inspection duties of all kinds at any time that his services might be required. It would be unnecessary for him to be in the continual employment of the Division, but during the spring and autumn months he could be advantageously used to the benefit of all who desire to grow better trees and to produce better fruit. This plan is followed in a number of states and the results obtained are apparent in the rapidity with which they are advancing in horticultural importance.

Notwithstanding the many handicaps, considerable advancement has been made during the past year. An effort has been made to bring the working of the Division into personal contact with as many orchardists as possible. To this end many demonstrations have been given in preparing insecticides and fungicides, in pruning and in spraying. Exhibits have been made at fairs; talks have been given before horticultural societies, high schools, farmers' clubs and institutes. That these things are of value and appreciated is apparent from the great interest taken and attention given at these meetings. We trust that it will be possible to greatly extend the scope of these different lines during the succeeding year.

#### NURSERY INSPECTION.

The nursery business in Ohio is an industry of considerable importance and should receive the patronage of all farmers and fruit growers of the state. It has been estimated from reports received from nurserymen that the value of nursery stock growing in the state this year mounted to \$1,365,000.00, and that over 2,000 men are employed on nursery premises.

Applications received between January 1 and June 1.....	16
Applications received between June 1 and December 31.....	824
<b>Total.....</b>	<b>840</b>
Certificates of inspection issued.....	792
Certificates of inspection refused or held for various reasons.....	32

For the first time in the history of this Division it was impossible to inspect all nurseries in the state by September 15th, as required by law. Seven inspectors were constantly engaged in this work after the first day of July, but the large increase in the number of places to be examined made it impossible to finish by the required date. When it is understood that 824 places were to be examined during a period of 64 working days, or that an average of about 13 nurseries were to be examined daily by seven inspectors, some idea of the magnitude of this work may be obtained. Many of the nurseries of small fruit plants do not require very much time, but a number of the general nurseries require the attention of several inspectors for periods varying from several days to several weeks. It would be impossible to grant certificates of nursery inspection on the strength of these examinations if it were not possible to supplement the work by a reinspection of the stock at shipping time.

This year Ohio nurserymen were asked to notify this office, or any of the assistant inspectors, of the receipt of nursery stock from nurserymen of other states. An inspection of such stock has been deemed necessary for the protection of our certificate. Even though such stock is accompanied by an official certificate of inspection, it is frequently affected with dangerous pests, and when included in Ohio shipments it reflects upon the character of our work, and also becomes a menace wherever planted. The nurserymen have realized that this precaution was also for their protection, and they have willingly co-operated with the inspectors in this matter. The discovery of a number of affected shipments during the fall shipping season has proven the necessity and value of this inspection.

As shown by the figures given at the end of this report, many thousands of nursery stocks have been destroyed because of infestation by San Jose scale. This serious infestation was largely due to favorable conditions of the previous year for the development of this insect. In several instances where blocks of nursery stock were grown near infested premises—usually cities and towns—practically every tree in the block was found to be infested, and their destruction necessary. Quite often poor judgment is shown by the nurseryman in planting stock in dangerous proximity to such places. In fighting San Jose scale and other pests every natural advantage should be made use of and chances of the above nature should be avoided as far as possible.

In examining strawberry plantations very careful inspection was made for the strawberry root louse. This insect was found to be quite generally distributed throughout the strawberry section of the state. Its presence is usually noticeable by the weakened or dead condition of the plants. In some instances strawberry beds were found to have been entirely destroyed by this insect, in others only certain portions were affected while in still others the insect was found, but not in sufficient

numbers to have caused any noticeable injury. The disposal of plants was refused from beds seriously affected. Where no apparent injury has been caused, the following treatment was required: Beds must be burned over between December 1st and March 15th, in order to destroy as many eggs as possible. No plants may be removed until an inspection shows all eggs to have hatched (this is usually about the first of April depending on the locality) and must either be fumigated with hydrocyanic acid gas or dipped in a tobacco decoction. Our observations have shown that practically all eggs have hatched by the above mentioned date in ordinary seasons.

### FUMIGATION.

For the successful treatment of nursery stock by this method it is necessary to have a gas-tight building, pure chemicals, loose arrangement of stock so that the gas can penetrate to all parts, and a sufficient length of exposure, in order that the treatment may be effective. To insure these conditions, every fumigating house or box in the state was tested with smoke at the beginning of each packing season in order to detect any possible opening through which gas might escape. All potassium cyanide is ordered through this office and secured from one source where its purity can quickly be determined at any time. Inspectors supervise the fumigation of all stock, except at rare intervals, when it is not possible to reach the nurseryman without causing serious delay.

With these precautionary measures the possibility of sending out infested stock is reduced to a minimum. There is no danger of injury to stock thus treated, and growers should insist on receiving officially fumigated stock.

Practically every nurseryman in Ohio, especially those shipping to other states, are suitably equipped with fumigating houses or boxes, according to their needs.

At the commencement of the budding season a circular letter was mailed to all nurserymen, calling their attention to the necessity of fumigating all bud-sticks. Although they are aware of the danger of using buds not cared for in this manner, this precaution is, for various reasons, often neglected. Many letters of thanks were received from nurserymen for calling their attention to this important matter.

Thirty-seven certificates of fumigation have been issued during the year. A list of nurserymen holding these certificates is given at the close of this report.

### ORCHARD INSPECTION.

Four hundred petitions for orchard inspection have been received during the year; 277 of them have been inspected, resulting in the examination of 99,399 trees. This exceeds by far the number of orchards ex-

amined in any previous year. It has not been possible to make these inspections as promptly as desired, owing to our many other duties and an insufficient number of inspectors. It quite often occurred that a prompt visit would have prevented serious loss to the orchardist, and it is regrettable that sufficient funds are not available in order that prompt service might be given.

During the past years owners of orchards, other than commercial orchardists, have not taken advantage of the privilege of an inspector's visit for the purpose of examining their orchards. Many fruit growers did not understand that this work is done entirely free of charge. The large increase in the number of requests shows that there is a better understanding in regard to the advantage of free orchard inspection. In several sections where an inspector was sent to make a few examinations, the demand for his services became so great that practically every orchard in the community was inspected before he was able to leave.

Several serious cases of peach yellows were discovered in the great peach belt of Ottawa county this year. It is imperative that a careful inspection be made of this territory during the coming summer. From four townships in this county 625 carloads of peaches were shipped this year, and the crop was estimated at but 25 per cent. of an average.

The magnitude of this industry and its threatened destruction by yellows makes necessary a careful inspection of this territory to the exclusion of all other duties. It is also necessary to have the co-operation of all fruit growers in this section in stamping out this disease before the infection has become serious.

#### NURSERY AGENTS AND DEALERS.

A list of certified agents and dealers is given elsewhere in this report. It includes the names of those who have filed sworn statements for deliveries during the fall of 1909 and spring of 1910. This list does not include all nursery agents operating in the state, as those representing Ohio nurserymen are not required to file statements if they deliver stock in the original package.

It was impossible, because of more important duties, to make an examination of the packing grounds of dealers during the present year. Very few of them "heel in" stock for any length of time, and most dealers have stock shipped to their customers direct from the nursery where purchased. It is necessary, however, to examine such grounds at least every year.

#### INSECT NOTES.

The loss to nurserymen and orchardists of the state from insect pests during the past year has been a serious one. The toll levied by the many



different species of aphids upon the vitality of plants was indeed heavy. Perhaps the greatest injury from this class of insects was that caused by the rosy apple aphid. Complaints and specimens of injury were received from practically all sections of the state.

San Jose scale, the apple leaf hopper and wooly aphid have been the worst offenders against nursery stock. Serious loss, as usual, has resulted to apple stock from wooly aphid. In one nursery this insect was found to be affecting pear stock, resulting in considerable loss in one block of pear seedlings and also in some one-year buds. Pear stock does not easily withstand an attack of this insect and seldom recovers from serious infestation of the roots.

The apple leaf hopper continues to be troublesome to some nurserymen by its attack upon the leaves of nursery stock. Its control is rather difficult and but little effort has been made to check its ravages.

#### \*THE BROWN TAIL MOTH.

Through the courtesy of the New York Bureau of Horticulture, information was received in January that winter webs of the brown tail moth had been discovered on imported nursery stock received in that state.

Steps were immediately taken to intercept and inspect all such shipments entering Ohio. A letter was sent to all nurserymen requiring them to notify this office of the receipt of all imported stock, and to hold the same unopened until an inspector could make an examination of the shipment. The co-operation of the nurserymen aided us very materially in making a thorough examination of this stock.

The total number of stocks inspected (largely fruit tree seedlings) was 3,624,197. The number of brown tail webs found, 644; the number of stock treated with miscible oil, 1,318,276.

The majority of imported stock is received during the first four months of the year. It was fortunate that other duties were not pressing at that season of the year, as it required the entire attention of the inspection force to inspect and treat these shipments during their arrival.

In making these inspections each stock was examined, and all those bearing brown tail webs were destroyed. The remainder of the stock in infested cases was dipped in a miscible oil solution in order to destroy any caterpillars which may have escaped from the webs. All packing material in the case was burned, and the box was either burned or thoroughly sprayed with oil.

After imported stock was transferred to the field in the spring a

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\*A more extended account of this insect is given in Bulletin No. 10, Division of Nursery and Orchard Inspection.

careful inspection was made, in order to detect any webs which might have escaped previous inspections. In June another examination was made of this stock, giving close attention to leaf injuries. No evidences of the presence of brown tail caterpillars were found, and it seems safe to conclude that, for the present, this destructive pest has been prevented from becoming established in Ohio.

Had it not been for this inspection, it is very probable that the brown tail moth would have been introduced into no less than twenty different localities of the state. The loss thus averted cannot be estimated, but the thousands of dollars expended in fighting this insect by those states where it is present shows very clearly the value of our nursery and orchard inspection law; and the prevention of the introduction of this one pest more than justifies the expenditure of every dollar that has been used in inspection work since its inception.

#### THE GYPSY MOTH.

An egg cluster of this insect was found by Assistant Inspector F. D. Heckathorn while examining a shipment of imported quince seedlings. Although careful inspection was made, no other egg clusters were found. Nursery stock, as it is imported, does not offer favorable places for the deposition of these egg masses, and for this reason the danger of the introduction of this insect in this manner is not so great as that of the brown tail moth.

#### INVESTIGATIONS.

##### LITTLE PEACH.

Mention was made in the Report of Nursery and Orchard Inspection for 1908 that the presence of the little peach was suspected in the peach belt of Ottawa county. In the month of August, Assistant Inspector H. J. Speaker (who is also a peach grower), was sent to the Michigan peach belt for the purpose of observing this disease, where it is very prevalent, and to familiarize himself with its characteristics.

After spending some time in this investigation, and in looking over the situation in the peach regions of Ohio, it is his opinion that little peach has not yet made its appearance here.

##### WOOLY APHIS.

Experiments begun during the preceding year in endeavoring to find suitable remedies for the control of this insect were continued during the

present year. Several new materials were added to those used the year before, and the number of nursery stocks treated was greatly increased. As the work will be continued through another season, no results will be given at this time.

#### STRAWBERRY ROOT LOUSE.

Some observations were made on the period at which the eggs of this insect hatch. It is necessary to know the approximate time of hatching, so that treatment may be applied at the proper time.

In some extended observations made in Summit county, where this insect is quite troublesome, a very few eggs were found as late as April 15th, and but few of the young lice had reached the roots of the plants. They were found to be very plentiful on leaves and young growing shoots. As the season was somewhat late this year it is possible that ordinarily all hatching has taken place at an earlier date in this locality. In southern Ohio the hatching period is from two to three weeks earlier.

Owing to the fact that the young insects are slow in finding their way to the roots after hatching, it is necessary, in dipping, to cover not only the roots, but the entire plant as well.

#### TEST OF REMEDIES.

The number of proprietary insecticides and fungicides introduced is increasing each year. Many letters are received relative to the effectiveness of the different brands. In order to capably advise our correspondents it is necessary to test those brands which are mentioned most frequently or seem to be in greatest demand.

During the present year a number of different makes of the concentrated lime and sulphur solution were tested in orchards. The results were generally satisfactory.

Considerable complaint was received from fruit growers who had used some of these materials, and our investigations of these cases showed that poor results were received. Solutions were claimed to have been diluted according to manufacturers' recommendations. Many other examinations were made where very satisfactory results had followed the use of commercial brands of lime and sulphur.

In view of the fact that there seems to be some variation in the effectiveness of these materials as used by the careful orchardist, it is not deemed advisable to publish results of our tests of these remedies. Correspondence, however, is invited and advice as to the reliability of the brands tested is given.

In the Ottawa peach belt the commercial product was used almost

entirely last year, but during the present season most of the orchardists are following the old plan of preparing the wash at home, or of securing the material from the local plants operated by different orchardists. The greatest use for the proprietary article is by owners of city premises or others who have but a few trees or plants to treat and are not justified in providing equipment for making their solutions.

### EXHIBITS AT STATE AND COUNTY FAIRS.

At the Ohio state fair and one county fair an exhibit was made, consisting of insects, plants' diseases, fruit and nursery stock affected with different pests, photographs, spraying materials, nozzles, etc.

This was a new departure for this Division, but the great interest which it created, and the good accomplished, amply demonstrated the value of this plan in placing the workings of the Division before fruit growers, and in presenting to them many of the troublesome pests with which they are forced to contend.

Preparation of this exhibit was not undertaken soon enough to make it as complete as desired, but for another reason its efficiency and instructive value will be greatly enhanced. It is hoped that in addition to the State Fair it will be possible to visit as many county fairs as time and funds will permit.

### ORCHARD DEMONSTRATIONS.

A number of demonstrations in pruning and spraying were held in county infirmity orchards during the spring months. These places are, as a rule, centrally located, and being county institutions many people were attracted to the meetings. Many requests were received for these meetings, but could not be granted because of the lateness of the season and other duties which could not be neglected.

Spraying solutions of different kinds were prepared and applied and several trees were usually selected and pruned in a proper manner. Talks were given explaining all of these operations as they were performed.

An account of the different meetings follows:

#### PUTNAM COUNTY.

About 225 men and women were present at this meeting, which was held on April 24th. Very close attention was given to everything said

and done. Mr. W. P. Frantz, superintendent of the infirmary, did all in his power to make the meeting a success. The lime-sulphur solution, used in destroying San Jose scale, was prepared and applied. The best methods for controlling different pests were explained. Mr. Wm. Miller, member of the State Board of Agriculture, was present, and discussed very thoroughly methods of orchard management, including pruning, spraying, cultivation and fertilization. The selection and planting of nursery stock was also touched upon by Mr. Miller. Assistant Inspector H. J. Speaker pruned several different kinds of fruit trees according to up-to-date methods. The unusual interest shown at this meeting was very gratifying to those in charge. The many requests for our services in this county show very clearly the widespread influence of this meeting.

#### COLUMBUS GROVE, PUTNAM COUNTY.

The demand for a meeting at this place was so insistent that arrangements were made for a demonstration on May 2d. Mr. D. W. Light kindly offered the use of his orchard. The weather was very disagreeable and the attendance was not as large as it would otherwise have been. About fifty were present. Lime-sulphur solution was prepared, but owing to a very severe snow-storm no application was made to the trees. Some pruning was done and talks were given on different problems of orchard management and insect control.

#### PORTAGE COUNTY.

This meeting was held on the 25th of May. About 40 were present. The orchard at this place is an old one, but with proper spraying and pruning will be valuable for many years. The canker worm was very plentiful in this orchard and was doing considerable injury. Bordeaux mixture with arsenate of lead was discussed and prepared, and several trees were sprayed with the outfit of this Division, which was shipped there for this purpose. One of the large apple trees was pruned, and the top reduced in a manner to lessen the difficulties of spraying. The methods and advantages of banding in controlling canker worms were explained. Advanced horticultural methods were treated by Mr. Wm. Miller. The interest taken in the meeting was good, and courtesies shown by the superintendent and board were appreciated.

#### GREENE COUNTY.

The attendance was about 30. The pressure of general farm work at this season of the year prevented many from attending. Demonstrations

were given in preparing Bordeaux mixture with arsenate of lead as a poison. Some large apple trees were pruned by Mr. Speaker and explanation of his work made. Unusual interest in knowing the methods used for controlling insects affecting flowering plants was shown by the ladies present. A number of specimens of insects and injuries were brought to the meeting, and remedies for their control given.

#### CLERMONT COUNTY.

Meeting was held on June 7th. The very favorable weather for farm work, which had been greatly delayed, kept the attendance down to 20. The interest was very good, however, and talks were given on the subjects discussed at other meetings. A number of trees were pruned and reasons given for the methods used.

#### PUBLICATIONS.

The correspondence of the office has been unusually heavy during the year. Several thousand letters have been written in addition to 4,000 circular letters relating to various subjects which have been mailed to nurserymen and farmers throughout the state.

A number of articles have been prepared for the daily, county and agricultural papers. Papers have been read and addresses given before farmers' institutes, farmers' clubs, high schools and town meetings.

The following publications have been prepared by the chief inspector during the year:

"Progress Made in Nursery and Orchard Inspection Work." (Nineteenth Annual Report, Ohio State Farmers' Institute, 1908.)

"Report of Nursery and Orchard Inspection for 1908." (Report of the Forty-second Annual Meeting of the Ohio State Horticultural Society at Columbus, Ohio, January, 1909.)

"The Brown Tail Moth—Its Possible Introduction Into Ohio." (Bulletin No. 10, Division of Nursery and Orchard Inspection, Ohio Department of Agriculture.)

"State Laws and Regulations Concerning the Interstate Shipment of Nursery Stock." (Circular No. 3, Section Revision, Division of Nursery and Orchard Inspection, Ohio Department of Agriculture.)

"Increasing the Demand for Orchard Inspection." (Read at the Annual meeting of the Association of Horticultural Inspectors, Boston, Mass., 1909.)

#### ACKNOWLEDGMENTS.

The writer feels especially indebted to Dr. L. O. Howard, chief of the Bureau of Entomology, Washington, D. C., and to Prof. G. G. At-

wood, of the State Department of Agriculture, Albany, N. Y., for many notifications relative to shipments of imported nursery stock en route to Ohio parties. Thanks are also due Ohio nurserymen for their cheerful assistance in aiding us to prevent the establishment of the brown tail moth brought into the state on imported stock.

The work of the Division this year increased out of all proportions to the assistance provided. This has placed additional duties upon the deputy inspectors, and the uncomplaining manner with which they have performed their work is greatly appreciated.

Respectfully submitted,

N. E. SHAW,  
*Chief Inspector.*

## STATISTICS.

Trees, shrubs, plants and vines condemned by this Division and destroyed by owners.

## IN ORCHARDS.

For San Jose scale.....	3,547 trees
For oyster-shell scale.....	12 trees
For scurfy scale.....	30 trees
For peach yellows.....	2,863 trees
For black knot.....	176 trees

Total.....	6,628 trees
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For San Jose scale.....	1,200 feet osage orange hedge
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## IN NURSERIES.

For San Jose scale.....	42,252 trees
For scurfy scale.....	32 trees
For Putnam scale.....	14 trees
For wooly aphids.....	5,208 trees
For black knot.....	14 trees
For San Jose scale.....	455 shrubs
For oyster-shell scale.....	165 shrubs
For San Jose scale.....	16 plants

Total.....	48,156 stocks
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Trees, shrubs, plants and vines treated in accordance with the directions of this Division.

With lime-sulphur wash for San Jose scale.....	56,992 trees
With lime-sulphur wash for oyster-shell scale.....	474 trees
With lime-sulphur wash for scurfy scale.....	1,855 trees
With lime-sulphur wash for Putnam scale.....	2,069 trees
With lime-sulphur wash for San Jose scale.....	1,858 shrubs
Treated for black knot.....	397 shrubs

Total.....	63,645
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Nursery stocks fumigated with hydrocyanic acid gas for San Jose scale.

Trees.....	4,835,816
Shrubs.....	741,902
Plants.....	285,325
Vines.....	78,913

Total.....	5,941,956
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Number of orchard trees inspected.....	230,051
Number of acres of nursery stock inspected.....	6,438



# LIST OF OHIO NURSERYMEN 1909—1910

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Ables, Perry W., Cheshire, O.....	467	Small fruit plants.....	2
Albaugh, T. F., Clyde, O.....	148	Small fruit plants.....	3
Allcock, H. W., Saybrook, O.....	701	Small fruit plants.....	1
Allen, W. A., & Son, Geneva, O.....	296	General nursery stock.....	20
Alspach, J. W., Carroll, O.....	714	Small fruit plants.....	5
American Rose & Plant Co., Springfield, O.....	58	General nursery stock.....	1½
Amos, Walter M., Langsville, O.....	511	Small fruit plants.....	1
Andrews, J. W., Waynesburg, O.....	757	Small fruit plants.....	1½
Ankrom, Mrs. J. D., McArthur, O.....	727	Fruit trees.....	1½
Anson, Geo. H., Clarksville, O., Oasis Fruit Farm.....	724	General nursery stock.....	5
Archer, R. E., Pomeroy, O.....	614	Small fruit plants.....	1
Armstrong, F. C., Elkton, O.....	391	Small fruit plants.....	25
Armstrong, R. W., Elkton, O.....	390	Small fruit plants.....	20
Armstrong, Sam, London, O.....	751	Fruit trees.....	1½
Arnold, S. J., Dayton, O.....	4	Small fruit plants.....	2
Ashford, J. C., Rogers, O.....	393	Fruit plants and vines.....	10
Athey, Harlan, Cheshire, O.....	419	Small fruit plants.....	3
Augsburger, Peter, Beaver Dam, O.....	471	Small fruit plants.....	½
Aultfather, H. H., Minerva, O.....	726	Small fruit plants.....	9
Bailey, Wm., Yellow Springs, O., Yellow Springs Fruit Farm.....	40	General nursery stock.....	2
Baird, W. A., Bucyrus, O.....	691	Small fruit plants.....	3
Baird, W. C., Ashtabula, O.....	154	Fruit trees.....	¼
Baird & Brady, Troy, O., Eureka Nursery.....	3	General nursery stock.....	5
Baker, C. V., Stoutsville, O., Wildwood Fruit Farm.....	704	General nursery stock.....	5
Baker, Frank, Clyde, O.....	728	Small fruit plants.....	1½
Ball, Joseph, Cheshire, O.....	460	Small fruit plants.....	2
Barb, J. S., Spokane, O.....	705	Small fruit plants.....	½
Barber, H. E., Brunswick, O.....	332	Small fruit plants.....	10
Barber, Wm., Vigil, O.....	552	Small fruit plants.....	4
Barclay, G. D., & Son, Ravenna, O.....	87	Small fruit plants.....	1
Barhite, D. C. & B. G., Wauseon, O.....	666	Fruit plants and vines.....	2½
Barker & Graham, Middleport, O.....	494	Small fruit plants.....	6
Barnes, A., & Son, Mt. Healthy, O.....	491	General nursery stock.....	25
Barnes, M., & Co., Station K, Cincinnati, O., Barnes Nurseries.....	528	General nursery stock.....	50
Barnes, M. F., Hamilton, O.....	207	General nursery stock.....	18
Barnhart, J. K. & A. C., Springfield, O.....	67	Small fruit plants.....	1
Barnhart, J. L., Port William, O.....	699	Small fruit plants.....	1½
Barr, A. C., Fredericktown, O.....	685	Small fruit plants.....	1
Barr, L. M., Dayton, O.....	45	General nursery stock.....	5
Barth, J. S., New Bremen, O.....	348	General nursery stock.....	1
Bartlett, A. R., Painesville, O.....	529	Small fruit plants.....	¾
Bartley, Robert, Delta, O.....	670	Shade trees.....	½
Barton, A. J., Cuyahoga Falls, O.....	273	Small fruit plants.....	2
Bassinger, J. H., Calla, O.....	584	Small fruit plants.....	4
Beck & Beck, Piqua, O., Echo Inn Nursery.....	43	General nursery stock.....	6
Beekley, Jno., Rutland, O.....	424	Small fruit plants.....	8
Beebe, Chas. A., Norwalk, O.....	294	Small fruit plants.....	5
Beekley, C. E., West Salem, O.....	418	Small fruit plants.....	10
Benner, Geo., Lucasville, O.....	750	Small fruit plants.....	3
Benner, J. H., Croton, O.....	573	General nursery stock.....	¼
Bennig, F. W., Painesville, O.....	913	Small fruit plants.....	½
Bennighoff, J. D., Mansfield, O.....	244	Small fruit plants.....	1

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock
Benson, Clark, New Carlisle, O.....	48	Small fruit plants.....	3
Benton, H., Ashland, O.....	359	Small fruit plants.....	2
Bernard, A. F., Painesville, O.....	79	General nursery stock.....	7
Bernard, F. F., Painesville, O.....	71	General nursery stock.....	6
Berry, P. D., Dayton, O., Berry's Nursery.....	7	Small fruit plants.....	50
Bertolette, Glenn, Columbiana, O.....	254	Small fruit plants.....	1
Betscher, J., Canal Dover, O.....	483	Small fruit plants.....	4
Betcher, C., Canal Dover, O.....	171	General nursery stock.....	12
Betz., W. A., & Co., Bedford, O.....	283	General nursery stock.....	1
Biglow, E., Copley, O.....	759	Small fruit plants.....	6
Billings, Chas., Cuyahoga Falls, O.....	243	Small fruit plants.....	3
Birch & Roubeshush, Carrollton, O.....	674	General nursery stock.....	10
Birt, H. G., Mallet Creek, O.....	336	Small fruit plants.....	3
Black, R. J., Bremen, O., Black's Nursery.....	723	General nursery stock.....	10
Blosser, Frank, Bremen, O.....	667	Small fruit plants.....	2
Bodiker, W. E., & Son, New Carlisle, O.....	24	Small fruit plants.....	10
Bohlender, Peter, & Sons, Tippecanoe City, O., Spring Hill Nurseries.....	105	General nursery stock.....	150
Boice, M. C., Kyger, O.....	491	Ornamentals.....	$\frac{1}{4}$
Bork, Phillip H., Tiffin, O.....	694	Fruit trees.....	$\frac{1}{4}$
Boster, W. S., Chesapeake, O.....	439	Small fruit plants.....	3
Boston, F. C., Washingtonville, O.....	248	Small fruit plants.....	1
Botkin, S. C., New Carlisle, O., Bethel Fruit Farm.....	539	Small fruit plants.....	4
Boughton, E. J., Brooklyn, O.....	297	Small fruit plants.....	3
Bowen, Giles, Vales Mills, O.....	625	General nursery stock.....	$\frac{3}{4}$
Bowen, Leroy, Perry, O.....	141	Small fruit plants.....	2
Bowlus, R. P., Perry, O.....	109	Small fruit plants.....	6
Braden, James, Jr., Bellefontaine, O.....	293	Shade trees.....	$\frac{1}{4}$
Bradford, B. G., Ravenna, O.....	643	Small fruit plants.....	$2\frac{1}{2}$
Bradley, F. J., Casstown, O.....	57	Fruit trees.....	$\frac{1}{2}$
Brammer, Amos, Rock Camp, O.....	223	Small fruit plants.....	2
Brammer, F. M., Proctorville, O.....	440	Small fruit plants.....	3
Brandt, L. M., Miamisburg, O.....	5	Small fruit plants.....	$1\frac{1}{2}$
Brehmer, J. J., Circleville, O.....	661	Ornamentals.....	$\frac{1}{8}$
Brewster, E. M., Perry, O.....	379	General nursery stock.....	5
Brigham, C. W., Mantua Station, O.....	672	Small fruit plants.....	3
Brosius, T. G., Tiffin, O.....	561	Shade trees.....	2
Brown, C. C., Cardington, O., Evergreen Farm.....	627	Small fruit plants.....	1
Brown, H. C., Yellow Springs, O.....	10	Ornamentals.....	1
Brown & Klinger, Crooksville, O.....	470	Small fruit plants.....	2
Brucker, John, Gallipolis, O.....	443	Small fruit plants.....	3
Bucher, G. S., Forge, O.....	89	Small fruit plants.....	$\frac{1}{2}$
Buechly, E. M., Greenville, O., Buechly Nursery.....	741	General nursery stock.....	4
Buechly, N., Clayton, O., Salem Nursery.....	2	General nursery stock.....	13
Bull & Brady, St. Paris, O., Champaign Nur- sery Company.....	270	General nursery stock.....	3
Buren, Andrew V., Bremen, O.....	610	Small fruit plants.....	$1\frac{1}{2}$
Burkholder, Harry P., Geneva, O.....	181	Small fruit plants.....	1
Burkholder, Hiram, Geneva, O.....	132	Small fruit plants.....	4
Burson, Chas. F., Rogers, O.....	326	Small fruit plants.....	3
Burton, J. S., Casstown, O., Hill Top Nursery.....	36	General nursery stock.....	$1\frac{1}{2}$
Buskirk Bros., Independence, O.....	551	General nursery stock.....	20
Cain, James G., Marietta, O., Sand Hill Nursery.....	664	Fruit trees.....	1
Call, S. W., Perry, O., Call's Nursery.....	381	General nursery stock.....	100
Campbell, Chas., Langsville, O.....	498	Small fruit plants.....	4
Campbell, L. W., Barnesville, O.....	534	Small fruit plants.....	$1\frac{1}{2}$
Campbell, Ralph J., West Park, O.....	175	General nursery stock.....	4
Campbell, M. L., Bremen, O.....	735	Small fruit plants.....	5

## LIST OF OHIO NURSEYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Cannon, Asbury, Saltillo, O-----	472	General nursery stock-----	1
Cardwell, Frank, Vinton, O-----	16	Small fruit plants-----	4
Carico, J. M., South Point, O-----	224	Small fruit plants-----	2
Carle, Edwin L., Geneva, O-----	213	Small fruit plants-----	$\frac{1}{2}$
Carle, Fred A., Ashtabula, O-----	157	Small fruit plants-----	1
Carlisle, I. B., Canfield, O-----	581	Small fruit plants-----	30
Carrell, Wm., Adrian, O-----	631	Small fruit plants-----	$1\frac{1}{4}$
Carr's, M. L., Sons, Yellow Springs, O-----	98	General nursery stock-----	50
Carson & Darst, Rutland, O-----	495	Small fruit plants-----	6
Carson, R. B., Middleport, O-----	496	Small fruit plants-----	$6\frac{1}{2}$
Carson, Wm., & Sons, Middleport, O., Carson Nursery-----	427	Small fruit plants-----	12
Carter, W. L., Rogers, O-----	387	Small fruit plants-----	5
Cartwright, I. D., Toledo, O-----	676	Shade trees-----	1
Cash, Wm., Brooklyn, O-----	198	Small fruit plants-----	2
Case, Wm., Columbiana Station, O-----	659	Small fruit plants-----	1
Cassell Nursery Co., Lakewood, O-----	557	General nursery stock-----	20
Cassidy, J. W., Augusta, O-----	435	Small fruit plants-----	6
Castle, O. E., Galion, O-----	690	Small fruit plants-----	$5\frac{1}{2}$
Chalfant, Mrs. Emma, & Son, Centerburg, O-----	684	Small fruit plants-----	2
Chambers, Geo. T., Lewis Center, O-----	712	Small fruit plants-----	$\frac{1}{2}$
Champion, H. J., & Son, Perry, O-----	200	General nursery stock-----	55
Childs, Geo., Perry, O-----	140	Small fruit plants-----	2
Childers, H. A., Proctorville, O-----	453	Small fruit plants-----	$1\frac{1}{2}$
Christman, D. P., Delta, O-----	668	Small fruit plants-----	2
Clark, Katherine W., Ravenna, O-----	647	Small fruit plants-----	2
Clay, M. C., Greenford, O-----	303	Small fruit, Evergreens-----	1
Clayton, T. J., & Son, Croton, O-----	415	Small fruit plants-----	1
Cleary, W. H., Cumberland, O-----	654	Small fruit plants-----	1
Coale, Wm. L., Warren, O., Whitney Evergreen Nursery-----	380	General nursery stock-----	5
Coffee, John C. E., Salem, O-----	343	Small fruit plants-----	4
Coggeshall, J. C., Little Hocking, O-----	680	Small fruit plants-----	$\frac{1}{2}$
Cole, W. B., Painesville, O., Avenue Nursery-----	208	General nursery stock-----	125
Colwell, W. W., Perry, O-----	774	Small fruit plants-----	1
Compton, Jas. H., Clyde, O-----	658	Small fruit plants-----	1
Cook, J. H., & Son, Perry, O-----	145	Small fruit plants-----	5
Cope, Eliphas, Rogers, O., Rogers Nursery-----	531	General nursery stock-----	6
Cope, James, Rogers, O-----	388	Small fruit plants-----	7
Cope, L., Rogers, O-----	395	Small fruit plants-----	10
Cope, Price, Salem, O-----	301	Small fruit plants-----	21
Cope, W. G., Beloit, O., Quaker Hill Nursery-----	411	Small fruit plants-----	55
Cowen, Ellsworth, Barnesville, O-----	94	Small fruit plants-----	16
Cowen, Ross, Xenia, O-----	524	Small fruit plants-----	15
Cox, E. G., Proctorville, O., Ensee Nursery-----	652	General nursery stock-----	4
Coy, M., Louisville, O-----	621	Small fruit plants-----	1-10
Cranz, Lewis C., Ira, O-----	262	Small fruit plants-----	$\frac{1}{4}$
Craven, C. D., Cardington, O., Alum Creek Fruit Farm-----	730	Small fruit plants-----	4
Crawford, John H., Rogers, O-----	389	Small fruit plants-----	6
Crawford, M., Co., Cuyahoga Falls, O-----	246	Small fruit plants-----	15
Crawford, Milton, Salem, O-----	564	Small fruit plants-----	4
Croft, Geo. L., New Carlisle, O-----	75	Small fruit plants-----	1
Crow, Willis, Kitts Hill, O-----	174	Small fruit plants-----	10
Culp, J. B., Columbiana, O., Quality Hill Fruit Farm-----	354	Small fruit plants-----	4
Curry, C. M., Bayard, O-----	764	Small fruit plants-----	$2\frac{1}{2}$
Cushman Gladiolus Co., Sylvania, O-----	575	Ornamentals-----	0
Cuthbert, C. H., Kent, O-----	280	Small fruit plants-----	$\frac{1}{2}$

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Dally, C. E., Sardis, O.....	179	Small fruit plants.....	5
Damon, John O., Brunswick, O.....	329	Small fruit plants.....	$\frac{1}{8}$
Davenport, Jas. H., Clyde, O.....	732	Small fruit plants.....	$1\frac{1}{2}$
Davis, Russel, Xenia, O.....	34	Small fruit plants.....	1
Davis, J. E. & Thos. Z., Delaware, O.....	711	General nursery stock.....	3
Day, John, & Son, Fremont, O., Fremont Nur- sery.....	298	General nursery stock.....	20
Delong, Jacob, Lancaster, O.....	719	Small fruit plants.....	3
Dennison, J. W., Dexter, O.....	478	Small fruit plants.....	5
Dern, Geo. E., Dayton, O.....	8	Small fruit plants.....	2
Detrick, Stephen, Osborn, O.....	25	Small fruit plants.....	9
Dillon, Richard, Yellow Springs, O.....	52	Small fruit plants.....	5
Donahue, J. F., Madison, O.....	187	Small fruit plants.....	1
Dole, J. Herbert, Ravenna, O.....	644	Small fruit plants.....	$\frac{1}{2}$
Doolittle, H. O., Mansfield, O., R. 3.....	548	Small fruit plants.....	3
Dormally, Chas. W., Crown City, O.....	463	Small fruit plants.....	5
Doty, J. H., Plimpton, O.....	403	Small fruit plants.....	$1\frac{1}{2}$
Drew, Geo., & Daughter, Clyde, O.....	295	Small fruit plants.....	2
Drew, W. H., Lyons, O.....	648	Small fruit plants.....	4
Duerr, Chas., Granville, O.....	521	Ornamentals.....	$\frac{1}{8}$
Durk, H. A., Rogers, O.....	384	Small fruit plants.....	$\frac{1}{2}$
Dvorak, Frank, Garrettsville, O.....	639	Small fruit plants.....	1
Dyer, J. W., Spencer Station, O.....	556	Small fruit plants.....	8
Earhart, Wm. H., Lexington, O.....	311	Small fruit plants.....	$1\frac{1}{2}$
Eaton, L. D., Proctorville, O.....	21	Small fruit plants.....	$\frac{1}{8}$
Eblin, A. H., Middleport, O.....	489	Small fruit plants.....	4
Edgar, E. E., Troy, O.....	13	Small fruit plants.....	$\frac{1}{2}$
Edgerton, W. D., Barnesville, O.....	355	Small fruit plants.....	4
Eichhorn, J. F., Youngstown, O.....	255	Small fruit plants.....	$\frac{1}{4}$
Einhard, F. S., Clyde, O.....	588	Small fruit plants.....	5
Eilker, John, Bremen, O.....	617	Small fruit plants.....	1
Eilker, J. H., Van Wert, O.....	345	Small fruit plants.....	3
Elsea, Sam C., Lithopolis, O.....	682	Small fruit plants.....	4
Elsea, C. R., Lithopolis, O.....	677	Small fruit plants.....	1
Ely, W. C., Cheshire, O.....	568	Small fruit plants.....	3
Emmons, E. S., & Sons, Millport, O.....	431	Small fruit plants.....	6
Engle, P. C. & W. C., Lima, O.....	318	General nursery stock.....	5
Ennis, Henry, Sycamore, O.....	689	Small fruit plants.....	2
Entsminger, Nathan, Langsville, O.....	500	Small fruit plants.....	2
Eppert, A. A., Amelia, O.....	51	Small fruit plants.....	$1\frac{1}{4}$
Ernst, Chas., Moscow, O., Moscow Nursery.....	125	General nursery stock.....	20
Erwin, W. H., Troy, O.....	28	Osage orange and catalpa.....	4
Essig, Oliver, Ravenna, O., R. 2.....	279	Small fruit plants.....	$4\frac{1}{2}$
Esterly, Frank E., Columbiana, O.....	305	Small fruit plants.....	5
Evans, Geo. W., Dayton, O.....	85	Small fruit plants.....	5
Everett, J. S., Bremen, O.....	635	Small fruit plants.....	1
Everhart, E. B., Cuyahoga Falls, O.....	241	Small fruit plants.....	$\frac{1}{2}$
Ewart, Mortimer, Mogadore, O.....	358	Small fruit plants.....	1
Ewing, John L., Pomeroy, O., R. 1.....	613	Small fruit plants.....	2
Eyman, V. H., Pleasantville, O.....	721	Small fruit plants.....	1
Fackler, M. M., Ashland, O.....	239	Small fruit plants.....	2
Fairmount Nursery, Troy, O.....	201	General nursery stock.....	400
Fall, J. C., Eaton, O.....	72	Grape vines.....	$\frac{1}{8}$
Fardon, Fred J., Geneva, O.....	185	Small fruit plants.....	2
Farm & Garden Specialty Co., 285 N. High St., Columbus, O.....	713	General nursery stock.....	8
Farmers Nursery Co., Tippecanoe City, O.....	193	General nursery stock.....	400
Farnsworth, W. W., Waterville, O., Clover Leaf Fruit Farm.....	665	Small fruit plants.....	14

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock
Fauver, Irving, C., West Dover, O.....	186	Small fruit plants.....	1½
Fearn, Homer, North Industry, O.....	760	Small fruit plants.....	1½
Feitshans Bros., Laura, O.....	83	Small fruit plants.....	¼
Felton, Wm., Cuyahoga Falls, O.....	242	Small fruit plants.....	2
Felty, Louis, St. Henry, O.....	347	General nursery stock.....	0
Fessenden, I. F., Norwalk, O.....	535	Small fruit plants.....	2
Fieldhouse, Lawrence, Washingtonville, O.....	394	Small fruit plants.....	¾
Fife, C. E., Cheshire, O.....	499	General nursery stock.....	1½
Finney, T. T., Millersburg, O., Edgewood Nursery.....	562	General nursery stock.....	8
Fisher, Wm., Clyde, O.....	779	Small fruit plants.....	½
Flohr, Manasses, Apple Creek, O.....	428	Small fruit plants.....	1
Fogle, Luther, South Olive, O.....	172	Small fruit plants.....	1½
Folden, A. C., Dexter, O.....	746	Small fruit plants.....	1
Ford, J. H., Ravenna, O., Ford Seed Co.....	645	General nursery stock.....	10
Fox, John, & Son, Covington, O., Greenville Creek Nursery.....	541	General nursery stock.....	6
Frederick, F. M., & Son, Beach City, O.....	482	Small fruit plants.....	3
Freeman, Mrs. A. D., & Son, Phoneton, O., Poplar Grove Nursery.....	736	General nursery stock.....	60
French, James, Rogers, O.....	325	Small fruit plants.....	1½
French, Milo, Rogers, O.....	385	Small fruit plants.....	4
French, A. B., Clyde, O., French Nursery.....	137	General nursery stock.....	50
Fretz, Arthur, Canal Dover, O., Brandywine Nursery Co.....	775	Small fruit plants.....	1
Frey, C. E., Dundee, O.....	515	Small fruit plants.....	1
Fries, Chas., Clifton Park, Cleveland, O., Rocky River Nursery.....	218	General nursery stock.....	12½
Friesner, J. D., Lancaster, O., Pleasant Ridge Nursery.....	679	General nursery stock.....	10
Fulton, Harlan, Gallipolis, O.....	444	Small fruit plants.....	2½
Funderburg, J. C., New Carlisle, O.....	63	Small fruit plants.....	½
Funderburg, J. O., New Carlisle, O.....	76	Small fruit plants.....	¼
Funk, Calvin, Lancaster, O.....	636	Small fruit plants.....	½
Furay, W. S., Osborn, O.....	9	Small fruit plants.....	2
Gable, Henry P., West Salem, O.....	429	Small fruit plants.....	7
Garber, J. W., Belleville, O.....	309	Small fruit plants.....	10
George, B. F., Rogers, O.....	324	Small fruit plants.....	51
George, Thos. F., Ada, O.....	503	Small fruit plants.....	3
George, James A., Cardington, O.....	628	Small fruit plants.....	1
Gessaman, S. G., Phoneton, O.....	544	Small fruit plants.....	8
Getz, C. E., Washingtonville, O.....	580	Small fruit plants.....	1½
Geyer, H. H., Norwich, O.....	776	Fruit trees.....	1
Geyer, J. L., & Son, Norwich, O.....	517	General nursery stock.....	1
Gilland, C. S., Pomeroy, O., Hemlock Grove Fruit Farm.....	612	Small fruit plants.....	3
Gillet, Frank, Wellington, O.....	416	Small fruit and shade.....	¼
Gillette, S. L., Kent, O.....	282	Small fruit plants.....	1½
Glasgow, A. F., Belle Center, O.....	292	Evergreens.....	2
Godward, Owen, Salem, O.....	302	Small fruit plants.....	5-6
Good & Reese Co., The, Springfield, O.....	82	Ornamentals.....	¼
Goodrich, Sarah F., Geneva, O.....	127	Small fruit plants.....	¼
Gortner, W. W., Lancaster, O.....	597	Small fruit plants.....	1
Gossett, A. L., Lithopolis, O.....	678	General nursery stock.....	4
Grabiel, W. H., West Mansfield, O.....	233	Small fruit plants.....	2
Graham, John, Langsville, O.....	426	Small fruit plants.....	6
Graham, P. M., Logan, O.....	702	Small fruit plants.....	5
Grapes, R. L., Langsville, O.....	487	Small fruit plants.....	½
Graves, Mrs. E. C., Rock Creek, O.....	286	Small fruit plants.....	½

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Graves, W. J., Painesville, O.....	84	Small fruit plants.....	1½
Green, E. D., Dorset, O.....	162	Small fruit plants.....	1
Green, E. C., & Son, Medina, O.....	335	Small fruit plants.....	1½
Green, L. E., Sharon Center, O., Granger Nursery.....	745	General nursery stock.....	10
Green, L., & Son Co., Perry, O., Western Reserve Nursery.....	206	General nursery stock.....	300
Greider, A. E., New Carlisle, O.....	62	Small fruit plants.....	1½
Greider, John, Brandt, O.....	15	Small fruit plants.....	4
Gribben, F. R., Shiloh, O.....	401	Small fruit plants.....	1
Griffith, J. W., Plymouth, O., Griffith Fruit Farm.....	161	Small fruit plants.....	5
Grimes, W. B., Rutland, O.....	425	Small fruit plants.....	4½
Grim, Monroe L., Washingtonville, O.....	249	Small fruit plants.....	¼
Grim, Lewis, New Vienna, O.....	97	Small fruit plants.....	1
Grove, Frank S., Bremen, O.....	637	Small fruit plants.....	4
Groves, T. A., Barnesville, O.....	95	Small fruit plants.....	1½
Gwinner, R. H., Ashland, O.....	269	Small fruit plants.....	¼
Halderman, J. W., Brandt, O., Brandt Nursery.....	53	Small fruit plants.....	11
Halfhill, John, Cheshire, O.....	567	Small fruit plants.....	2
Hall, Jno. G., Barnesville, O.....	771	Small fruit plants.....	3½
Hall, F. M., Bremen, O.....	634	Small fruit plants.....	3
Hanauer, Frank, Dayton, O.....	660	Ornamentals and shrubs.....	2½
Hanson, J. B., Niles, O.....	226	Small fruit plants.....	1
Harbaugh & Sons, Brandt, O.....	139	General nursery stock.....	15
Hardwick, Wm. E., Bremen, O.....	632	Small fruit plants.....	2
Harnden, Mrs. Alex., Clyde, O.....	188	Small fruit plants.....	2½
Harris, Mart V., Winona, O.....	655	Small fruit plants.....	5
Harsh, D. D., Malvern, O.....	761	Small fruit plants.....	3
Hart, Burton, Millersburg, O.....	337	Small fruit plants.....	1½
Harter, J. S., Copley, O.....	333	Small fruit plants.....	1½
Hartley, Alonzo, & Co., Troy, O.....	35	Small fruits, evergreens.....	13
Hartsook, A. S., Vinton, O.....	681	Small fruit plants.....	1¾
Hartsook, W. H., Vinton, O.....	17	Small fruit plants.....	1
Hastings, J. B., North Kenova, O.....	756	Small fruit plants.....	1
Hathaway, Wic, Madison, O.....	133	Small fruit plants.....	16
Hathorn, John, Rome, O., Brook Fruit Farm.....	214	Small fruit plants.....	7
Hatten, H. C. & F. M., New Carlisle, O., Gem Nurseries.....	78	General nursery stock.....	12
Haverland, B. H., Mt. Healthy, O.....	215	General nursery stock.....	3
Hawkins, H. C., Sycamore, O.....	629	Small fruit plants.....	1½
Hawkins, J. K., Kensington, O.....	641	Small fruit plants.....	3
Hawkins, W. W., & Sons, Kensington, O.....	783	Small fruit plants.....	8
Hay, Harry R., Van Wert, O.....	344	Small fruit plants.....	1
Hazeltine, Frank & Son, Amboy, O.....	155	Small fruit plants.....	2
Heade, John, Brandt, O.....	19	Small fruit plants.....	2
Headley, Frank B., Pataskala, O., Shady Oak Nursery.....	436	Small fruit plants.....	½
Healea, L. C., Cardington, O.....	626	Small fruit plants.....	3
Heberling, H. G., Cadiz, O.....	600	Small fruits, fruit trees.....	1
Heffner, C. L. V., Brandt, O.....	12	Small fruit plants.....	2
Heiks, C. V., Troy, O.....	29	Catalpas, osage hedge.....	8
Hemm, Geo., Sidnev, O., Sidney Nursery.....	366	General nursery stock.....	5
Hempy, A. M., Bellefontaine, O.....	288	Small fruit plants.....	4
Henderson, G. S., Negley, O.....	323	Small fruit plants.....	6
Henry, David, Bayard, O.....	725	Small fruit plants.....	2
Henry, Wm., Givens, O.....	173	Small fruit plants.....	1
Herbert, Lee, Morgantown, O.....	184	Fruit trees.....	2
Hess, R., Akron, O., Akron Nursery.....	277	General nursery stock.....	8½

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Higgins, D. M., Athens, O.	622	Small fruit plants	3
Highland Floral Co., Springfield, O.	753	Shrubs	$\frac{1}{2}$
Hilty, C. D., Bluffton, O.	502	Small fruit plants	$\frac{1}{2}$
Hilty, J. S., Bluffton, O.	718	Small fruit plants	3
Hoag, I. W., Berlinville, O., Garden of Eden Fruit Farm	177	General nursery stock	3
Hoffman, Stephen A., Upper Sandusky, O.	688	Small fruit plants	2
Holmes, Melvin, Cheshire, O.	758	Small fruit plants	3
Holmes, T. I., Bidwell, O.	462	Small fruit plants	$1\frac{1}{2}$
Hoffman, Henry, Bidwell, O.	484	Small fruit plants	2
Hoffman, C. W., Dayton, O.	54	General nursery stock	3
Hoge, Jos. S., Barnesville, O.	742	Small fruit plants	$1\frac{1}{2}$
Holden, F. S., Geneva, O.	128	Small fruit plants	2
Holland, Geo., Shepard, O.	786	Small fruit plants	1
Holland, Harry, Salem, O.	559	Small fruit plants	$2\frac{1}{2}$
Holt, J. B., Rutland, O.	490	Small fruit plants	$3\frac{1}{2}$
Holt, N. D., Rutland, O.	484	Small fruit plants	2
Holwick, W. L., Salem, O.	304	Small fruit plants	$\frac{1}{2}$
Hood, Asbury, Cheshire, O.	768	Small fruit plants	3
Hood, C. M., Girard, O.	227	Small fruit plants	$\frac{1}{2}$
Horn, Fred, Lancaster, O.	596	General nursery stock	1
Horst, Jonas, Columbiana, O.	251	Small fruit plants	$1\frac{1}{2}$
Horst, Ira C., Columbiana, O.	252	Small fruit plants	$\frac{1}{2}$
Hough, A. K., Geneva, O.	129	Small fruit plants	2
Huestis, Edward C., Rogers, O.	396	Small fruit plants	3
Hufford, Eli, West Rushville, O.	722	Small fruit plants	$2\frac{1}{2}$
Hufford, J. B., Stoutsville, O.	594	Small fruit plants	1
Humes, E. K., Urbana, O.	290	Small fruit plants	2
Humm, W. W., & Son, Columbiana, O.	313	Small fruit plants	$2\frac{1}{2}$
Humphreys, G. W., Andis, O.	276	Small fruit plants	11
Hunt Bros., Nursery, Lewis Hunt, Proctorville, Ohio	452	Small fruits, fruit trees	3
Huntley, Chas. S., Vinton, O.	605	Small fruit plants	2
Huntley, Frank, Vinton, O.	748	Small fruit plants	5
Huntley, H. D., Vinton, O.	606	Small fruit plants	5
Huston, Benj., Negley, O.	322	Small fruit plants	4
Hutchinson, Fred, Clyde, O., Nickle Plate Fruit and Produce Farm	216	Small fruit plants	9
Hutchins, J. Ernest, Granville, O.	522	Small fruit plants	5
Hyman, D., Mansfield, O., R. 2	274	Small fruit plants	5
Imlay, John D., Zanesville, O.	749	Ornamentals, shrubs	$\frac{1}{2}$
Imler, S. B., Kingston, O.	438	Small fruit plants	0
Jackson, Nancy E., Langsville, O.	512	Small fruit plants	1
Jenkins, J., Winona, O., Jenkins Nursery	368	General nursery stock	20
Johnson, David, Salesville, O.	167	Small fruit plants	$2\frac{1}{2}$
Johnson, E. D., Fredericktown, O.	306	Small fruit plants	$1\frac{1}{2}$
Johnson, F. H., Rock Hill, O.	180	Small fruit plants	2
Johnson, J. L., Langsville, O.	492	Small fruit plants	4
Joliff, Cyrus, Painesville, O.	199	Fruit trees	3
Kail, J. E., Cheshire, O.	446	Small fruit plants	2
Kail, John W., Cheshire, O.	703	Small fruit plants	2
Kaiser, Fred, Athalia, O.	454	Fruit trees	2
Kastrup, S. M., Clyde, O.	117	Small fruit plants	$3\frac{1}{2}$
Keller, F. E., Canal Dover, O.	501	Small fruit plants	2
Kelso, W. M., Sabina, O.	696	Fruit trees	$\frac{1}{2}$
Kennedy, Ira, Rutland, O., R. 2	422	Small fruit plants	$1\frac{1}{2}$
Kennedy, Perley, Middleport, O.	488	Small fruit plants	5
Kennedy, Waid B., Langsville, O.	507	Small fruit plants	3
Kerr, W. B., Big Prairie, O.	340	Small fruit plants	4

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Keys, John G., Ironton, O.....	784	Small fruits, fruit trees.....	5
Kibler, Sherman, Bayard, O.....	604	Small fruit plants.....	5
Kiensle, W. E., Logan, O.....	615	Small fruit plants.....	3
King, Frank, New Carlisle, O.....	49	Small fruit plants.....	3
Kinney, Nathaniel, Bellville, O.....	300	Small fruit plants.....	1
Kitts, E. S., Kitts Hill, O., Kitts Hill Fruit Farm.....	663	Small fruit plants.....	3
Kline, Martin, Columbiana, O.....	537	Small fruit plants.....	1½
Klingensmith, David, Washingtonville, O.....	250	Small fruit plants.....	2
Kanuf, Frank, Canfield, O., Sunnyside Nursery.....	314	General nursery stock.....	1
Knopp, A. B., Columbus, O.....	253	Small fruit plants.....	4½
Knopp, J. R., Point Rock, O.....	624	Small fruit plants.....	2
Kohankie, Julius, Painesville, O.....	112	Ornamentals.....	¼
Kohankie, Martin, Painesville, O.....	70	Ornamentals.....	20
Kohankie, H., & Son, Painesville, O., Euclid Ave. Nursery.....	86	General nursery stock.....	50
Kolthoff, Fred, Norwood, O., 1918 Cleaney Ave.....	120	Ornamentals.....	¼
Kramer, Mathias, Ottoville, O.....	650	Small fruit plants.....	3
Kreitzer, I. H., & Sons, Phoneton, O.....	543	General nursery stock.....	10
Krout, W. D., Bremen, O.....	607	Small fruit plants.....	1½
Kumler, H. L., Baltimore, O.....	715	Small fruit plants.....	1½
Kuth, J. S., New Paris, O., State Line Fruit Farm.....	73	Small fruit plants.....	20
Landis, Webster, Brookville, O.....	26	Small fruit plants.....	2
Langdon, Amos, Chesapeake, O.....	781	Small fruit plants.....	3
Lapham, S. F., Madison, O.....	134	Small fruit plants.....	¼
Law, A. D., Delaware, O.....	473	Small fruit plants.....	20
Lawbaugh, W. J., Ashland, O.....	272	Small fruit plants.....	2
Lawrence, U. G., Marion, O.....	686	Small fruit plants.....	6
Lawrence, W. R., Marion, O.....	687	Small fruit plants.....	52
Lear, James H., Coshocton, O.....	383	General nursery stock.....	2
Leatherman, Chas. E., Wadsworth, O.....	264	Small fruit plants.....	1
Leedle Floral Co., Springfield, O.....	81	Ornamentals.....	2
Leffel, Elmer, Springfield, O., Pleasant View Nursery.....	80	Small fruit plants.....	1
Lehman, H. A., Osborn, O.....	33	Small fruit plants.....	1
Lehr, Moses, Shreve, O., Maple Leaf Fruit Farm.....	377	Small fruit plants.....	1½
Lemley, George, Cheshire, O.....	448	Small fruit plants.....	2
Lemley, James, Cheshire, O.....	468	Small fruit plants.....	2
Leonard, A. M., Piqua, O., Zinnia Ridge Nursery.....	50	Fruits, ornamentals.....	1½
Leonard, C. T., & Son, Andover, O.....	165	Small fruit plants.....	1
Lewis, John E., Washingtonville, O.....	315	Small fruit plants.....	4
Linn, A. J., Quaker City, O., Quaker City Nursery.....	166	General nursery stock.....	3
Lynn, E. E., Salesville, O.....	119	General nursery stock.....	10
Livingston Seed Co., The, Columbus, O.....	64	General nursery stock.....	10
Long, Chas. E., Carlton, O.....	763	Small fruit plants.....	2
Longanecker, E. J., Columbiana, O.....	545	Small fruit plants.....	2
Low, J. A. J., New Waterford, O.....	386	Small fruit plants.....	4
Lower, Isaiah, Barberton, O.....	404	General nursery stock.....	2½
Lowery, Wm., Langsville, O.....	493	Small fruit plants.....	4
Lynd, E. T., South Point, O.....	582	Small fruit plants.....	7
Lynd, J. H., Sheridan, O.....	402	Small fruit plants.....	3
Lynd, James P., South Point, O.....	260	Small fruit plants.....	8
Lynd, W. L., North Kenova, O.....	583	Small fruit plants.....	4
Lynn, James L., Barnesville, O.....	93	Small fruit plants.....	3
Lytte, S. R., Sidney, O.....	365	Shade trees.....	¼
McBeth, Thos. A., Springfield, O.....	68	Ornamentals.....	6



## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
McCafferty & Harris, Frankfort, O-----	437	Small fruit plants-----	4
McCormick, M. C., Coshocton, O-----	651	Small fruits, shade-----	$\frac{1}{8}$
McCoy, J. G., Negley, O-----	321	Small fruit plants-----	5
McCullough & Sons Co., The, Cincinnati, O., 316 Walnut Street-----	108	Ornamentals-----	4
McDonald, Chas., Tiverton, O-----	565	General nursery stock-----	5
McFarland, Earl, Springfield, O-----	66	Small fruit plants-----	$1\frac{1}{2}$
McGlade, Frank, Hebron, O-----	413	Small fruit plants-----	1
McGlinchey, James, Salem, O-----	558	Small fruit plants-----	$1\frac{1}{2}$
McGregor Bros. Co., Springfield, O-----	747	Ornamentals-----	2
McGuire, F. A., Batavia, O., R. 5-----	121	Small fruit plants-----	$\frac{1}{2}$
McKee, B. G., South Point, O-----	350	Small fruit plants-----	6
McKittrick, A. H., Ashland, O., Clear Creek Nursery-----	536	Small fruit plants-----	1
McMurray, Josiah, New Springfield, O-----	312	Small fruit plants-----	3
McNary, J. W., Dayton, O., Dayton and Xenia Nurseries-----	65	Ornamentals-----	15
McNary, T. W., Cambridge, O-----	171	General nursery stock-----	2
McQuate, D. N., Ashland, O-----	572	Small fruit plants-----	1
McVitty, J. M., Perry, O., Ridge View Nursery-----	361	General nursery stock-----	40
Mack, A. A., North Kingsville, O-----	153	General nursery stock-----	$\frac{1}{2}$
Mallory, S. O., Perry, O-----	790	Small fruit plants-----	1
Maltbie, H. G., Geneva, O-----	123	Small fruit plants-----	7
Manbeck, S. E., Beach City, O-----	516	Small fruit plants-----	3
Manchester & Joiner, Perry, O-----	146	General nursery stock-----	6
Marshall, S. M., & Son, Kensington, O-----	432	Small fruit plants-----	15
Marshall, W. D., Franklin Square, O-----	316	Small fruit plants-----	$1\frac{1}{2}$
Martin, Alex., Ravenna, O., Walnut Hill Farm-----	646	Small fruit plants-----	2
Martin, J. C., Cherryville, O-----	450	Small fruit plants-----	10
Martin, H. M., & Son, Howenstine, O-----	577	Small fruit plants-----	$3\frac{1}{2}$
Martin, W. K., Horatio, O., Climax Nursery-----	99	General nursery stock-----	14
Mason, Dr. T. R., Sugar Grove, O-----	595	Ornamentals-----	0
Mason, Emmet, Clyde, O-----	116	Small fruit plants-----	$2\frac{1}{2}$
Matthews, David, Cheshire, O-----	459	Small fruit plants-----	2
Mellen, E. F., Mentor, O-----	353	General nursery stock-----	$13\frac{1}{2}$
Mellen, Geo. H., Co., The, Springfield, O-----	60	Ornamentals-----	1
Merriman & Sweet, Perry, O-----	210	General nursery stock-----	5
Metcalf, W. C., Willoughby, O-----	113	Small fruit plants-----	$2\frac{1}{2}$
Meyers, A. F., Augusta, O-----	434	Small fruit plants-----	3
Meyers, Frank, Geneva, O-----	131	Small fruit plants-----	5
Miami Valley Nurseries, Tippecanoe City, O-----	107	General nursery stock-----	150
Michael, Geo. A., Clyde, O-----	777	Small fruit plants-----	$2\frac{1}{2}$
Michaels, B. A., Tiffin, O-----	371	Small fruit plants-----	$1\frac{1}{2}$
Midkiff Bros., Hemlock Grove, O-----	611	Small fruit plants-----	4
Miller, B. F., Baltimore, O-----	716	Small fruit plants-----	$1\frac{1}{2}$
Miller, Chas. A., Painesville, O-----	90	Ornamentals-----	$\frac{1}{4}$
Miller, D. J., & Son, Millersburg, O-----	591	Small fruit plants-----	$5\frac{1}{2}$
Miller, S. A., Clayton, O-----	6	Small fruit plants-----	1
Miller, Tom O., Frankfort, O-----	762	Small fruit plants-----	10
Miller, John F., White Oak, O-----	101	Small fruits, vines-----	1
Miller, H. C., Millersport, O-----	525	Small fruit plants-----	2
Mills, Chas. J., Brookville, O-----	52	Small fruit plants-----	2
Mitchell, W. T., & Son, Beverly, O., Beverly Nursery-----	1	General nursery stock-----	20
Molden, Edw., Kyger, O-----	420	Small fruit plants-----	$3\frac{1}{2}$
Molden, John L., Barnesville, O-----	189	Small fruit plants-----	6
Mong, C. J., Osnaburg, O-----	592	Small fruit plants-----	6
Montgomery, Cary W., Newark, O-----	773	Small fruit plants-----	10
Mooney, E. K., Madeira, O., Madeira Nursery-----	138	General nursery stock-----	4

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Moore, Alex., Barnesville, O.....	219	Small fruit plants.....	2½
Moore, James A., Cheshire, O., Moore Nursery.....	449	Small fruit plants.....	4
Moore, W. A., Rogers, O.....	374	Small fruit plants.....	3½
Moore & Wilgus, Xenia, O.....	542	Small fruit plants.....	3½
Moore, S. R., Zanesville, O.....	518	General nursery stock.....	8
Morgan, H. C., Rome, O.....	237	Small fruit plants.....	2
Morlan, M. B., New Waterford, O.....	408	Small fruit plants.....	3
Morley, E. C., Youngstown, O.....	259	.....	0
Morris & Westfall, Point Rock, O.....	464	Fruit trees.....	4
Morrison, J., Cadiz, O.....	599	General nursery stock.....	½
Morton, Jno., Crestline, O.....	734	Small fruit plants.....	6
Morton, W. A., Dexter, O.....	782	Small fruit plants.....	2
Motter, Fred, Tippecanoe City, O.....	55	General nursery stock.....	4
Mox, Albert, Delphos, O., Delphos Nursery.....	563	General nursery stock.....	2
Muchmore, W. O., Fremont, O., Glen Hill Nursery.....	409	General nursery stock.....	8
Mullens, G. H., Andover, O.....	163	Small fruit plants.....	4
Mullen, Scott, North Kenova, O.....	455	Small fruit plants.....	1
Murdock, Wm., Proctorville, O.....	441	Small fruit plants.....	3
Murphy, Frank, New Carlisle, O.....	74	Small fruit plants.....	2
Murphy, M. J., Perry, O.....	192	Small fruit plants.....	1½
Musselman, W. L., New Carlisle, O., Railroad View Nursery.....	44	Small fruit plants.....	14
Myers, J. E., Kensington, O.....	642	Small fruit plants.....	2
Nalley, Henry, Bellaire, O.....	101	Small fruit plants.....	4
Naylor, H. S., Beloit, O.....	399	Small fruit plants.....	2
Neal, J. W., Essex, O.....	258	Small fruit plants.....	3½
Neal, Marion, Rock Camp, O.....	356	Small fruit plants.....	11
Neer, J. A., Huntsville, O.....	234	Small fruit plants.....	2
Neff, O. H., & Son, Osborn, O.....	56	Small fruit plants.....	10
Nelson, David, Dexter, O.....	475	Small fruit plants.....	1
Nelson, Peter, Dexter, O.....	476	Small fr it plants.....	1½
Nelson, Lewis, Rutland, O.....	423	Small fruit plants.....	1
Newton, C. H., Brunswick, O.....	331	Small fruit plants.....	2
Nichols, T. S., Mgr., Cleveland Nursery & Spraying Co., Cleveland, O.....	135	General nursery stock.....	1
Noland, G. T., Wakatomika, O.....	147	General nursery stock.....	5
Noland, J. P., Peninsula, O.....	357	General nursery stock.....	16
Norman & Hacker, Painesville, O.....	211	Shrubs.....	8
Oberst, R., Helena, O.....	547	Small fruit plants.....	1
Ogden, Noah, Dexter, O.....	477	Small fruit plants.....	5
Ohio Nursery & Supply Co., The, Elyria, O.....	417	General nursery stock.....	78
Osborn, C. L., Sidney, O.....	349	General nursery stock.....	½
Outland, C. C., Zanesfield, O., Maple Hill Fruit Farm.....	231	Small fruit plants.....	3
Overholser, Jerry, Xenia, O.....	31	Small fruit plants.....	1
Pagels, G. H., Worthington, O.....	191	Small fruit plants.....	10
Paine, C. H., Jefferson, O.....	196	Small fruit plants.....	¼
Palmer, T. M., Bidwell, O.....	456	Small fruit plants.....	1
Parker, T. E., Barnesville, O.....	533	Small fruit plants.....	6
Parmelee, H. L., North Jackson, O.....	257	Small fruit plants.....	2
Peck, John, Perry, O.....	144	Small fruit plants.....	1½
Peckham, L. C., Perry, O.....	152	Small fruit plants.....	2
Pemberton, R. M., South Point, O.....	221	Small fruit plants.....	2
Perry, Geo. R., Cambridge, O.....	360	Small fruit plants.....	3½
Phillips, M. E., Fredericktown, O.....	307	Small fruit plants.....	½
Pickett, G. S., & Son, Clyde, O.....	204	General nursery stock.....	65
Pickett, G. S., Clyde, O.....	205	General nursery stock.....	25
Pierce, L. B., Tallmadge, O.....	278	Small fruit plants.....	1

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Pierce, W. C., Troy, O.....	34	Small fruit plants.....	3
Pittenger, Geo., Clyde, O.....	769	Small fruit plants.....	1
Platner, D. W., Plimpton, O.....	339	Small fruit plants.....	2
Plettner, Henry, St. Marys, O.....	410	General nursery stock.....	1
Plummer, Geo. W., New Carlisle, O.....	540	Small fruit plants.....	2
Plummer, D. P., Bellefontaine, O.....	235	General nursery stock.....	4
Plymale, J. H., Gallipolis, O.....	405	Small fruit plants.....	3
Poe, G. H., Kenton, O., Poe's Vineyard.....	41	Vines.....	1½
Poling, John, Bremen, O.....	633	Small fruit plants.....	2
Post & Cummings, Painesville, O., Nickleplate Nursery.....	352	General nursery stock.....	2½
Postlewait, Selby, Barnesville, O.....	212	Small fruit plants.....	16
Pottorf, Seymour, Columbiana, O.....	538	Small fruit plants.....	2
Pottorf Bros., Kensington, O.....	532	Small fruit plants.....	10
Poulton, Henry, Spencer Station, O.....	190	Small fruit plants.....	4¼
Powell, H. A., Rock Camp, O.....	266	Small fruit plants.....	2
Presler, W. M., Adrian, O.....	692	Small fruit plants.....	¾
Pummer, Noah, Lancaster, O.....	710	Small fruit plants.....	1
Price, Jno., Barnesville, O.....	780	Small fruit plants.....	2
Prudential Nursery Co., The, Tippecanoe City, Ohio.....	202	General nursery stock.....	6
Purdham, Lee, Clyde, O.....	151	Small fruit plants.....	2
Quirk, B. F., Geneva, O.....	136	Small fruit plants.....	3
Raby, Mrs. Wm., Millersburg, O.....	369	Small fruit plants.....	4
Raby, Ralph H., Killbuck, O.....	370	Small fruit plants.....	5
Radcliff, Alfred, Alice, O.....	623	Small fruit plants.....	5
Raines, Wm., Roxabell, O.....	466	Small fruit plants.....	¼
Rasor, Geo. P., Wadsworth, O.....	263	Small fruit plants.....	3
Rathbun, Bert, Clyde, O.....	149	Small fruit plants.....	4
Reeser & Youngstrand, Springfield, O.....	752	Roses.....	½
Reeves, E. A., Fairmount, O., Lake View Nursery.....	586	General nursery stock.....	10
Reinhold, C., Akron, O., 20 Charles St.....	550	Shrubs.....	¼
Reminger, Mrs. J. D., Tiffin, O.....	364	Small fruit plants.....	2¼
Replogle, Jacob, Troy, O.....	38	Fruit trees.....	½
Resler, M. O., Lima, O.....	373	Small fruit plants.....	7
Rice, J. D., East Liverpool, O.....	393	Small fruit plants.....	2
Richardson, F. W., Hicksville, O.....	649	Small fruit plants.....	30
Richey, H. H., Lore City, O.....	169	Small fruit plants.....	2
Richmond, H. J., Geneva, O.....	700	Small fruit plants.....	1½
Rife, W. V., Dexter, O.....	479	Small fruit plants.....	4
Riley, O. N., Warsaw, O.....	382	Small fruit plants.....	1
Riley, J. N., Washington C. H., O., Fayette County Nursery.....	698	General nursery stock.....	9½
Robbins, F. O., St. Paris, O.....	271	Small fruit plants.....	2
Roberts, Chas., Dexter, O.....	481	Small fruit plants.....	1½
Robinson, R. N., Sidney, O.....	341	Small fruit plants.....	5
Rogers, M. H., Jamestown, O.....	69	Small fruit plants.....	4
Rogers, Jno. W., North Kenova, O.....	442	Small fruit plants.....	3
Rogers, L. S., Bowling Green, O., Silver Fruit Farm.....	570	Small fruit plants.....	2
Rogers, H. C., Mechanicsburg, O.....	291	Catalpas.....	40
Rollman, J. B., Jefferson, O.....	195	Fruit trees, small fruit.....	¼
Romine, Melzer, Langsville, O.....	497	Small fruit plants.....	3
Root, A. I., Medina, O.....	334	Shade trees.....	¼
Root, M. E., Qualey, O.....	18	Small fruit plants.....	½
Rose, Mrs. Lucius, Akron, O.....	526	General nursery stock.....	7
Rothfuss Bros., Lithopolis, O.....	707	Small fruit plants.....	3
Roush, Eph., Lima, O.....	372	General nursery stock.....	12

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Rowland, W. W., Perry, O.....	110	Small fruit plants.....	2
Royer, Jno., Kent, O., R. 6.....	281	Small fruit plants.....	1½
Rueb, A., & Son, Chillicothe, O., The Alum Cliffs Nursery.....	778	General nursery stock.....	7½
Rumfield, Henry, Langsville, O.....	486	Small fruit plants.....	1½
Rupp, W. H., Independence, O.....	176	Small fruit plants.....	2
Rutherford, R. C., Cheshire, O.....	421	Small fruit plants.....	2
Sage, Jay M., Chardon, O.....	115	General nursery stock.....	1½
Saltzgaber, Geo., W., Mansfield, O.....	708	Small fruit plants.....	1½
Sampsel, S. A., Clyde, O.....	589	Small fruit plants.....	5
Sanders, J. M., Hillsboro, O.....	755	General nursery stock.....	4
Sauttes, John F., Waynesburg, O.....	576	Small fruit plants.....	2
Sawyer, Frank, Norwalk, O., Norwalk Nursery.....	220	General nursery stock.....	8
Saxton, Jno. H., Dexter, O.....	480	Small fruit plants.....	3
Scarff, W. N., New Carlisle, O.....	203	General nursery stock.....	200
Scheidegger, H. W., Cortland, O.....	228	Small fruit plants.....	7
Scheidegger, P. L. & Adam, Baltimore, O.....	717	Small fruit plants.....	5
Schmidt & Botley, Springfield, O.....	59	Ornamentals.....	1
Schandel, V. H., North Industry, O.....	578	Small fruit plants.....	2
Schriel, Ed., Tiffin, O.....	695	Small fruit plants.....	3
Schriver, F. E., Grafton, O.....	319	Small fruit plants.....	2
Schweitzer, W., Pandora, O.....	740	Fruit trees.....	¼
Scott, Mrs. A. R., Vinton, O.....	767	Small fruit plants.....	2
Seith, W. A., Perry, O.....	142	Small fruit plants.....	½
Shafford, Ward, Tippecanoe City, O., Shafford Fruit Farm.....	30	Small fruit plants.....	5
Shaw, M. G., Jackson, O., Fruit Hill Orchard.....	178	Small fruit plants.....	1
Shaffer, J. B., Cridersville, O., Shawnee Nursery.....	320	General nursery stock.....	6
Sheets, L. T., Tippecanoe City, O.....	39	Catalpas.....	2
Shellenbarger, M., Zanesfield, O.....	287	Small fruit plants.....	10
Shields, W. A., Vinton, O.....	20	Small fruit plants.....	4
Shipman, E. H., Delaware, O.....	504	Small fruit plants.....	3
Shook, I. C., Perry, O.....	123	Fruit trees.....	2
Sidenstricker, Albert, & Son, Langsville, O.....	499	Small fruit plants.....	2
Siebenthaler, John, Dayton, O., Siebenthaler Nursery.....	27	General nursery stock.....	10
Simmons, T. C., Clyde, O.....	351	Small fruit plants.....	10
Simpkins, H. S., & Sons, Andover, O.....	164	Fruit trees.....	1
Simanton, J. A., Ashland, O.....	240	Small fruit plants.....	5
Skinner, E. M., Perry, O.....	789	Small fruit plants.....	½
Slanker, W. T., Brandt, O.....	23	Small fruit plants.....	10
Slaughter, Jacob, Osborn, O.....	22	Small fruit plants.....	14
Slutz, Wesley, North Industry, O.....	593	Small fruit plants.....	1½
Smith, A. C., Bayard, O.....	601	Small fruit plants.....	4
Smith, Henry, St. Paris, O.....	238	Small fruit plants.....	4
Smith, Daniel, Cheshire, O.....	466	Small fruit plants.....	5
Snell, W. A., Howell, O.....	451	Small fruit plants.....	5
Snider, Jno., Dexter, O.....	509	Small fruit plants.....	3
Souders, W. S., Rogers, O., Highland Fruit Farm.....	530	Small fruit plants.....	15
Southward, G. W., Williamsport, O.....	738	General nursery stock.....	7
Spangler, L. M., Morence, Mich.....	671	Small fruit plants.....	½
Speck, D. S., Shreve, O.....	338	Small fruit plants.....	1½
Spellman, W. W., Granville, O.....	122	Small fruit plants.....	¼
Springer, Geo., Talmadge, O.....	527	Small fruit plants.....	1
Sprinkle, Earl E., Jefferson, O.....	197	Small fruit plants.....	4
Stackhouse, B. F., Lisbon, O., Mt. Pleasant Small Fruit Farm.....	560	Small fruit plants.....	10

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Stackhouse, J. L., Kensington, O.....	430	Small fruits, Evergreens.....	7
Stackhouse, S. W., North Georgetown, O.....	342	Small fruit plants.....	5
Starbuck, Addison, Colerain, O.....	362	General nursery stock.....	8
Staup, J. W., Phoneton, O.....	11	Small fruit plants.....	10
Stevens, A. P., Perry, O.....	554	General nursery stock.....	15
Stewart, L. J., Jewett, O., Summerdale Fruit Farm.....	598	Small fruit plants.....	$\frac{1}{2}$
Stiers, V. C., Alexandria, O.....	523	Small fruit plants.....	$\frac{1}{4}$
Stillman, Frank A., Andover, O.....	285	Small fruit plants.....	5
Stine & Speed, Zanesville, O.....	519	General nursery stock.....	7
Stimmel, A., Paris, O.....	673	Small fruit plants.....	3
Stockman, E. G., Prospect, O., Prospect Nursery.....	770	Fruit and shade.....	1
Stoddard, F. L., Weston, O.....	571	Small fruit plants.....	3
Stokes, James, Clyde, O.....	118	Small fruit plants.....	2
Stoner, E. F., Dayton, O., R. 13.....	209	Small fruit plants.....	20
Stoner, Philo, Pulaski, O.....	683	Small fruit plants.....	2
Storms, H. G., Andis, O.....	225	Small fruit plants.....	5
Storrs & Harrison Co., The, Painesville, O., Painesville Nursery.....	124	General nursery stock.....	650
Story, E. A., Cheshire, O.....	458	Small fruit plants.....	3
Story & Vest, Zanesville, O.....	520	Small fruit plants.....	2
Strock, Sylvester, Dorset, O.....	194	Small fruit plants.....	2
Strowther, James, Urbana, O.....	236	Small fruit plants.....	3
Suter, P. C., Pandora, O.....	788	Small fruit plants.....	3
Swallow, Marion, Ridgeway, O.....	232	Small fruit plants.....	1
Swart, G. J., Wauseon, O.....	675	Small fruit plants.....	1
Sweizer, W. L., Cheshire, O.....	772	Small fruit plants.....	3
Swick, Wm. C., Bremen, O.....	608	Small fruit plants.....	$1\frac{1}{2}$
Swope, I. F., Galion, O.....	630	Small fruit plants.....	2
Tasker, O. F., Forgy, O.....	61	Small fruit plants.....	2
Taggart, W. I., New Carlisle, O.....	77	Small fruit plants.....	2
Teeter, D. M., Belleville, O.....	310	Small fruit plants.....	1
Teeter, Fremont, Belleville, O.....	308	Small fruit plants.....	5
Templin, W. B., Co., Calla, O.....	706	General nursery stock.....	$\frac{1}{4}$
Thayer, Guy, Garrettsville, O.....	638	Small fruit plants.....	$\frac{1}{2}$
Thomas, Wm., Pritchard, O.....	640	Small fruit plants.....	$\frac{1}{4}$
Thomas, Aaron, Cheshire, O.....	447	General nursery stock.....	8
Thompson, J. E., Ryansville, O.....	299	Small fruit plants.....	3
Thresh, Levi, & Sons, Carroll, O., Crystal Spring Farm.....	729	Small fruit plants.....	15
Tingley, C. B., & Son, Mansfield, O.....	245	Small fruit plants.....	5
Toland, T. C., Calcutta, O.....	566	Small fruit plants.....	10
Tombaugh, Wm., Alliance, O., R. 3.....	412	Small fruit plants.....	4
Tompkins, C. L., Lakewood, O.....	553	General nursery stock.....	5
Townsend, Daniel, Manker, O.....	585	Small fruit plants.....	2
Trout, E. A., Croton, O.....	731	General nursery stock.....	5
Tuckerman, R. C., Rutland, O.....	513	Small fruit plants.....	5
Turner, O. R., & Son, Rome, O.....	284	Small fruit plants.....	2
Uhlig, Peter, New Carlisle, O.....	42	Small fruit plants.....	9
Union, W. L., Barnesville, O.....	92	General nursery stock.....	4
Valentine, C. E., Norwalk, O.....	160	Small fruit plants.....	2
Vance, Wm., Langsville, O.....	508	Small fruit plants.....	2
Vandervoort, J. M., & Son, Wilmington, O., New Antioch Nursery.....	697	General nursery stock.....	25
Van Deusen, N. L., & Son, Brunswick, O.....	330	Small fruit plants.....	5
Van Driest, P. M., E. Cleveland, O., Euclid Avenue Nursery.....	217	General nursery stock.....	8
Van Horn, Mrs. Emma, Canton, O.....	733	Shade.....	1

## LIST OF OHIO NURSERYMEN—Continued.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Victor, Elizabeth, Nashport, O.....	765	Small fruit plants.....	2
Viers, M. F., Copley, O.....	375	Small fruit plants.....	5
Vonschrittz, A. L., Dexter, O.....	514	Small fruit plants.....	3
Vowles, Geo. W., Everett, O.....	261	Small fruit plants.....	1½
Wagner, B. P., Sidney, O., Wagner Park Conservatories.....	367	General nursery stock.....	25
Walburn, F. T., & Co., Point Rock, O.....	445	Fruit trees.....	1
Walker, Wm., Bayard, O.....	766	Small fruit plants.....	1½
Walker, S. F., Georgetown, O., Georgetown Nursery.....	183	Fruit trees.....	2
Ward, J. N., Cheshire, O.....	461	Small fruit plants.....	7
Ward, L. H., Ashville, O.....	787	Small fruit plants.....	4
Warner, M. H., E. Akron, O.....	785	Small fruit plants.....	2
Watts, John A., Bettsville, O.....	693	Small fruit plants.....	2
Watkins, E. D., Delta, O.....	669	Small fruit plants.....	1
Weaver, Henry E., Columbiana, O.....	229	Small fruit plants.....	1
Weaver, W. J., Leetonia, O.....	328	Small fruit plants.....	2½
Webb, J. H., Essex, O.....	222	Small fruits, apples.....	5
Webb, T. O., & Son, Essex, O.....	259	Small fruit plants.....	2
Webb, Duane W., Jr., Geneva, O.....	182	Small fruit plants.....	¼
Weber, Adam, Tallmadge, O.....	247	Small fruit plants.....	3
Webster, D. D., Portland, O.....	743	General nursery stock.....	1
Webster, Mrs. S. R., Rock Creek, O., Rose Cottage Nursery Co.....	230	Ornamentals, small fruits.....	1½
Webster, Dr. Geo. E., Kingsville, O.....	156	Small fruit plants.....	20
Weidner, Jacob, Bremen, O.....	619	Small fruit plants.....	2½
Webster, Walter A., Quaker City, O.....	168	Small fruit plants.....	3½
Welch, S. R., Painesville, O.....	111	Ornamentals.....	3
Welch, Geo. A., Van Wert, O.....	346	Small fruit plants.....	2
Welch, Mark, Painesville, O.....	587	General nursery stock.....	30
Wellman, Geo., New Knoxville, O.....	656	General nursery stock.....	3
Weltz's Sons Co., Wilmington, O.....	739	General nursery stock.....	35
Wenhart, Jno., E. Akron, O., R. 23.....	265	Small fruit plants.....	4
West, C. O., Perry, O.....	143	Small fruit plants.....	2
Werner Bros., Painesville, O.....	555	General nursery stock.....	10
West Bros., Damascus, O.....	400	General nursery stock.....	3½
West, T. B., Perry, O., Maplebend Nursery.....	104	General nursery stock.....	75
Westenbarger, David, Bremen, O.....	618	Small fruit plants.....	1½
Westenbarger, Irwin, Bremen, O.....	616	Small fruit plants.....	1
Westenbarger, Levi, Bremen, O.....	620	Small fruit plants.....	1½
Westover, L. L., Elkton, O.....	327	Small fruit plants.....	8
Wetzel Bros., Painesville, O.....	114	Ornamentals.....	4
White, Daniel, New London, O., White Fruit Farm.....	275	Small fruit plants.....	10
Whiteleather, Walter S., Moultrie, O.....	579	Small fruit plants.....	2
Whitt, J., Vermilion, O.....	159	Small fruit plants.....	7
Whitt, E. R., Vermilion, O.....	158	Small fruit plants.....	5½
Wilson, Geo. L., Dyesville, O.....	465	Small fruit plants.....	1
Wilcox, Wilbur, Cheshire, O.....	506	Small fruit plants.....	2
Wilent, Lemuel, Shreve, O.....	376	Small fruit plants.....	1½
Williams, B. F., Rock Camp, O.....	657	Small fruit plants.....	3½
Willis, Allen, Bayard, O.....	433	Small fruit plants.....	4
Willis, Benjamin, Bayard, O.....	602	Small fruit plants.....	½
Willis, Elmer, Rogers, O.....	407	Small fruit plants.....	2½
Willis, J. G., Andis, O.....	267	Small fruit plants.....	7
Willis, Thos. C., Bayard, O.....	603	Small fruit plants.....	5
Wilson, F. D., Geneva, O.....	130	Small fruit plants.....	2
Wilson, Geo., Marysville, O.....	88	General nursery stock.....	4
Windle, F. P., Columbiana, O.....	574	Small fruit plants.....	1

## LIST OF OHIO NURSERYMEN—Concluded.

Name and Address of Owner and Nursery.	Cert. No.	Kind of Stock.	Acres of Stock.
Winters, Elmer, South Point, O.....	268	Small fruit plants.....	2
Wise, W. W., DeGraff, O.....	546	Small fruit plants.....	1½
Wiseman, E. M., Dexter, O.....	510	Small fruit plants.....	5
Wittman, H. H., New Paris, O.....	103	Small fruit plants.....	3
Wolfgang, N. J., Leetonia, O.....	317	Small fruit plants.....	2
Wolford, Simon, Salem, O.....	392	Small fruit plants.....	2
Woods, W. C., Dearing, O.....	549	Small fruit plants.....	2
Wood, Ed., Weston, O.....	569	General nursery stock.....	1
Woodland, J. C., Barnesville, O.....	96	Small fruit plants.....	2
Woodsworth, H. P., Cambridge, O.....	170	Shade trees.....	½
Wooster Nursery Co.....	653	General nursery stock.....	10
Worman, Frank T., Co., Troy, O.....	48	General nursery stock.....	3
Wright, C. C., Clyde, O.....	378	Small fruit plants.....	4
Wright, E. M., Granville, O.....	662	Small fruit plants.....	½
Wright, John W., Vinton, O.....	457	Small fruit plants.....	3
Wright, P. E., Bremen, O.....	609	Small fruit plants.....	2
Wriker, S., Clyde, O.....	150	Small fruit plants.....	3
Wyss, Daniel, New Philadelphia, O.....	505	General nursery stock.....	5
Xenia Star Nurseries, Xenia, O.....	102	General nursery stock.....	125
Yoakam, S. M., Croton, O.....	414	Small fruit plants.....	¼
Yoder, J. M., Urbana, O.....	289	Small fruit plants.....	¼
Young, Edward, New Waterford, O.....	297	Small fruit plants.....	2
Zeigenfelder, James B., Troy, O.....	14	Small fruit plants.....	4
Zettler Co., The, Canton, O.....	709	General nursery stock.....	1
Zimmerman, J. F., Greenspring, O.....	590	Small fruit plants.....	1
Zinck, C., Brandt, O.....	10	Small fruit plants.....	4

## LIST OF CERTIFIED AGENTS

### 1909

Name of Agent.	Cert. No.	Name and Address of Nursery Represented.
Abrams, Henry J.-----	184	Missing Apple Co., Clayton, Ill.
Adams, Geo. B.-----	27	W. T. Mitchell & Son, Beverly, O.
Ames, Alva-----	273	Greening Bros. N. & O. Co., Monroe, Mich.
Armstrong, Z.-----	143	Chase Nursery, Geneva, N. Y.
Andrus, Geo.-----	203	Western New York Nursery Co., Rochester, N. Y.
Artz, Jacob H.-----	38	The Greening Nursery Co., Monroe, Mich.
Arnold, A. S.-----	165	Michigan Nursery Co., Monroe, Mich.
Auld, J. T.-----	242	Gold Nursery Co., Mason City, W. Va.
Ball, Geo. W.-----	237	Gold Nursery Co., Mason City, W. Va.
Barber, A. L.-----	162	Michigan Nursery Co., Monroe, Mich.
Bare, S.-----	166	A. B. French, Clyde, O.
Barr, John F.-----	138	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Bastard, J. H.-----	141	John Day, Fremont, O.
Bauman, Leonard C.-----	204	Western New York Nursery Co., Rochester, N. Y.
Black, Joseph-----	135	Brown Bros. Co., Rochester, N. Y.
Beard, H. C.-----	84	Brown Bros. Co., Rochester, N. Y.
Beckner, H. G.-----	129	Capital City N. & O. Co., Indianapolis, Ind.
Bensinger, Wm.-----	44	Missing Link Apple Co., Clayton, Ill.
Bigley, W. L.-----	93	Wm. C. Moore & Co., Newark, N. Y.
Bingham, A. W.-----	104	C. W. Stuart & Co., Newark, N. Y.
Binkley, D. D.-----	2	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Blackwell, Wm.-----	259	Gold Nursery Co., Mason City, W. Va.
Blaine, Oren-----	116	The Chase Nurseries, Geneva, N. Y.
Blazer, Thomas-----	248	Knight & Bostwick, Newark, N. Y.
Bossler, Elmer E.-----	45	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Bovenizer, Adam-----	92	Chase Nurseries, Geneva, N. Y.
Bowen, L. G.-----	264	Knight & Bostwick, Newark, N. Y.
Boyer, James-----	175	C. W. Stuart & Co., Newark, N. Y.
Brown, J. E.-----	117	Missing Link Apple Co., Clayton, Ill.
Bray, Chas.-----	250	Gold Nursery Co., Mason City, W. Va.
Brining, N. Earl-----	158	Michigan Nursery Co., Monroe, Mich.
Brodersen, B. L.-----	17	The Greening Nursery Co., Monroe, Mich.
Brower, G. W.-----	172	Knight & Bostwick, Newark, N. Y.
Buchanan, Jas. W.-----	72	Missing Link Apple Co., Clayton, Ill.
Brundage, H. E.-----	7	The Greening Nursery Co., Monroe, Mich.
Burnett, L.-----	122	The Hawks Nursery Co., Rochester, N. Y.
Calvert, S. M.-----	87	G. S. Pickett, Clyde, O.
Campbell, Joshua-----	173	Kalamazoo Nursery, Kalamazoo, Mich.
Campbell, Joshua-----	191	Missing Link Apple Co., Clayton, Ill.
Chatelain, L. A.-----	221	Emmons & Co., Newark, N. Y.
Chancey, J. B.-----	53	Hawks Nursery Co., Rochester, N. Y.
Chatelain, L. A.-----	134	Missing Link Apple Co., Clayton, Ill.
Clark, A. M.-----	121	The French Nursery Co., Clyde, O.
Clements, R. L.-----	66	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Clements, W. H.-----	208	Stark Bros. Nur. & Orch. Co., Louisiana, Mo.
Cole, Elmer-----	41	Missing Link Apple Co., Clayton, Ill.
Collins, J. Wallace-----	90	Emmons & Co., Newark, N. Y.
Conway, John-----	83	Hawks Nursery Co., Rochester, N. Y.
Cornelius, John C.-----	211	Stark Bros. N. & O. Co., Louisiana, Mo.
Correll, G. W.-----	217	Greening Nur. Co., Monroe, Mich.
Correll, G. W.-----	218	A. O. E. Baldwin, Bridgman, Mich.
Cotton, J. G.-----	222	Mutual Nursery, Monroe, Mich.
Crew, A. L.-----	198	Wm. C. Moore & Co., Newark, N. Y.



## LIST OF CERTIFIED AGENTS—Continued.

Name of Agent.	Cert. No.	Name and Address of Nursery Represented.
Croswell, W. S.-----	152	Capital City N. & O. Co., Indianapolis, Ind.
Crow, A. E.-----	236	Stark Bros. N. & O. Co., Louisiana, Mo.
Curtis, W. P.-----	268	Stark Bros. N. & O. Co., Louisiana, Mo.
Curtis, John S.-----	111	Brown Bros. Co., Rochester, N. Y.
Daniel, V. L.-----	233	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
DeBerry, Wm.-----	262	Missing Link Apple Co., Clayton, Ill.
DeBolt, Jno. O.-----	40	Stark Bros. N. & O. Co., Louisiana, Mo.
Denny, O. L.-----	247	Gold Nursery Co., Mason City, W. Va.
Derby, R., Jr.-----	10	The Greening Nursery Co., Monroe, Mich.
DeSoe, O. B.-----	25	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Devore, John-----	81	The L. Green & Sons Co., Perry, O.
Dietz, Wm.-----	82	The L. Green & Sons Co., Perry, O.
Dodd, T. P.-----	73	Missing Link Apple Co., Clayton, Ill.
Donahay, P. N.-----	187	Stark Bros. N. & O. Co., Louisiana, Mo.
Eastman, D. W.-----	107	Emmons & Co., Newark, N. Y.
Echer, Jesse E.-----	202	Western New York Nursery Co., Rochester, N. Y.
Edmondson, F. E.-----	147	C. W. Stuart & Co., Newark, N. Y.
Edwards, M. O.-----	101	Wm. C. Moore & Co., Newark, N. Y.
Hampton, Edward-----	258	Gold Nursery Co., Mason City, W. Va.
Eicher, M. A.-----	276	Greening Nursery Co., Monroe, Mich.
Evans, J. D.-----	182	Stark Bros. N. & O. Co., Louisiana, Mo.
Farneman, John-----	226	Thomas Marks & Co., Geneva, N. Y.
Fink, H. F.-----	105	M. H. Harmon Co., Geneva, N. Y.
Flater & Son-----	8	The Greening Nursery Co., Monroe, Mich.
Flora, Jacob, Jr.-----	267	Knight & Bostwick, Newark, N. Y.
Flory, Geo. A.-----	6	Greening Nursery Co., Monroe, Mich.
Fogle, Orlando-----	196	Stark Bros. N. & O. Co., Louisiana, Mo.
Ford, Myron O.-----	28	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Ford, M. O.-----	78	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Frey, A. L.-----	186	Wm. C. Moore & Co., Newark, N. Y.
Friedly, A. M.-----	58	G. S. Pickett, Clyde, O.
Gander, S. W.-----	120	Wm. C. Moore & Co., Newark, N. Y.
Gano, J. G.-----	37	W. C. Moore & Co., Newark, N. Y.
Gerber, Gideon J.-----	26	The Greening Nursery Co., Monroe, Mich.
Gheen, H. N.-----	216	Knight & Bostwick, Newark, N. Y.
Goldsberry, D. G.-----	238	Gold Nursery Co., Mason City, W. Va.
Gooch, J. M.-----	251	Gold Nursery Co., Mason City, W. Va.
Graham, C. C.-----	263	W. T. Mitchell & Son, Beverly, O.
Gray, Frank-----	213	Michigan Nursery Co., Monroe, Mich.
Green, G. W.-----	194	Knight & Bostwick, Newark, N. Y.
Griffin, W. V.-----	244	Gold Nursery Co., Mason City, W. Va.
Hagerty, Daniel-----	59	W. T. Mitchell & Son, Beverly, O.
Hammond, Leander-----	252	Stark Bros. N. & O. Co., Louisiana, Mo.
Hammond, Chas. E.-----	113	The Hawks Nursery Co., Rochester, N. Y.
Hanna, Calvin E.-----	199	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Hartman, Samuel-----	49	Missing Link Apple Co., Clayton, Ill.
Hartman, Samuel-----	50	Perry Nursery Co., Rochester, N. Y.
Harnden, Kneeland-----	85	French Nursery, Clyde, O.
Harrington, R. W.-----	118	Wm. C. Moore & Co., Newark, N. Y.
Hathaway, C. M.-----	70	Clark Nursery Co., Waterloo, N. Y.
Hawks, Richards-----	114	Emmons & Co., Newark, N. Y.
Hemlich, Fred.-----	214	Stark Bros. N. & O. Co., Louisiana, Mo.
Henricks, W. W.-----	131	J. K. Henby & Son, Greenfield, Ind.
Hill, William-----	257	French Nursery Co., Clyde, O.
Hoffer, I. E.-----	156	W. C. Moore & Co., Newark, N. Y.
Holcomb, Thos. H.-----	271	Emmons & Co., Newark, N. Y.
Holley, Wm.-----	51	Wm. C. Moore & Co., Newark, N. Y.
Hook, Lawrence I.-----	56	Missing Link Apple Co., Clayton, Ill.
Ingram, J.-----	69	Stark Bros. N. & O. Co., Louisiana, Mo.

## LIST OF CERTIFIED AGENTS—Continued.

. Name of Agent.	Cert. No.	Name and Address of Nursery Represented.
Isaac, John -----	164	Michigan Nursery Co., Monroe, Mich.
Jackson, Weldy -----	137	Chase Nursery, Geneva, N. Y.
Jamison, M. M. -----	139	Brown Bros. Co., Rochester, N. Y.
Johnson, E. L. -----	71	A. B. French, Clyde, O.
Kean, F. J. -----	171	Knight & Bostwick, Newark, N. Y.
Keller, E. M. -----	189	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Kilgore, J. C. -----	67	Greening Nursery Co., Monroe, Mich.
Killen, Wm. B. -----	86	Emmons & Co., Newark, N. Y.
King, John -----	63	Western New York Nursery Co., Rochester, N. Y.
Kinley, L. C. -----	205	A. B. French, Clyde, O.
Knight, J. A. -----	206	J. K. Henby & Son, Greenfield, Ind.
Knox, John -----	197	Stark Bros., Louisiana, Mo.
Kooken, John R. -----	278	Missing Link Apple Co., Clayton, Ill.
Kopp, Samuel -----	20	Greening Nursery Co., Monroe, Mich.
Kopp, Wm. G. -----	32	Greening Nursery Co., Monroe, Mich.
Kreager, Ashfordby --	112	The French Nursery, Clyde, O.
Kuemmerling, J. W. --	128	Saddler Bros., Bloomington, Ill.
Lamonda, J. O. -----	201	Stark Bros. N. & O. Co., Louisiana, Mo.
Lan, William -----	35	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Lane, M. O. -----	110	Wm. C. Moore, Newark, N. Y.
Lahugh, John M. -----	153	Knight & Bostwick, Newark, N. Y.
Larkin, Harry -----	220	Stark Bros. N. & O. Co., Louisiana, Mo.
Lemon, H. C. -----	1	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Leminger, Aaron -----	4	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Loutham, Chas. E. -----	207	Allen Nursery Co., Rochester, N. Y.
Love, T. H. -----	97	Brown Bros. Nursery Co., Rochester, N. Y.
Loyd, S. A. -----	103	Saddler Bros., Bloomington, Ill.
Lyons, Walter -----	89	Brown Bros. Co., Rochester, N. Y.
Lyons, Newton -----	36	Portland Nursery Co., Portland, Ind.
McArthur, J. L. -----	140	Brown Bros. Co., Rochester, N. Y.
McCann, Wm. C. -----	91	Missing Link Apple Co., Clayton, Ill.
McCarty -----	127	Capital City N. & O. Co., Indianapolis, Ind.
McColley, C. W. -----	9	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
McCormic, I. J. -----	255	Bremen Co., Bremen, Ind.
McCray, Harley -----	270	Gold Nursery, Mason City, W. Va.
McCurdy, Joseph -----	76	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
McCurdy, Joseph -----	18	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
McElhenie, A. W. -----	149	Greening Nursery Co., Monroe, Mich.
McEndru, A. A. -----	219	Stark Bros. N. & O. Co., Louisiana, Mo.
McGee, C. B. -----	235	Stark Bros. N. & O. Co., Louisiana, Mo.
McGee, C. B. -----	234	W. T. Mitchell & Son, Beverly, O.
McGovern, Geo. -----	279	Knight & Bostwick, Newark, N. Y.
McKee, J. W. -----	261	Missing Link Apple Co., Clayton, Ill.
McVeigh, B. R. -----	212	Meredith & Son, Kileen, Ind.
Mackey, Irwin -----	151	C. W. Stuart & Co., Newark, N. Y.
Mahon, Chas. -----	195	A. B. French, Clyde, O.
Malloy, M. K. -----	178	M. H. Harmon Co., Geneva, N. Y.
Malloy, J. D. -----	177	M. H. Harmon Co., Geneva, N. Y.
Mead, Peter -----	146	C. W. Stuart & Co., Newark, N. Y.
Miller, Chas. W. -----	272	Gold Nursery Co., Mason City, W. Va.
Milliken, J. C. -----	241	Gold Nursery Co., Mason City, W. Va.
Mulford, S. A. -----	169	J. K. Henby & Son, Greenfield, Ind.
Monnie, John -----	33	Greening Nursery Co., Monroe, Mich.
Mohn, J. E. -----	75	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Montgomery, Mrs. Ada -----	142	Kalamazoo Nursery, Kalamazoo, Mich.
Moon, Arthur -----	130	Capital City N. & O. Co., Indianapolis, Ind.
Moore, A. B. -----	229	Point Pleasant Nursery, Point Pleasant, W. Va.
Morris, Aaron -----	55	Chase Nurseries, Geneva, N. Y.
Morse, E. B. -----	61	G. S. Pickett, Clyde, O.

## LIST OF CERTIFIED AGENTS—Continued.

Name of Agent.	Cert. No.	Name and Address of Nursery Represented.
Mox, Ed. -----	274	Delphos Nursery, Delphos, O.
Mumford, A. R. -----	180	C. L. Van Inwagen, Newark, N. Y.
Murphey, A. C. -----	167	J. K. Henby & Son, Greenfield, Ind.
Nedro, Frank -----	39	Missing Link Apple Co., Clayton, Ill.
Neff, D. W. -----	145	Hawks Nursery Co., Rochester, N. Y.
Nejedly, John -----	23	Greening Nursery Co., Monroe, Mich.
Neuschwander, J. S. -----	46	Greening Nursery Co., Monroe, Mich.
Nicholson, W. H. -----	200	Stark Bros. N. & O. Co., Louisiana, Mo.
Nieprask, F. B. -----	79	Brown Bros. Co., Rochester, N. Y.
Noble, Edward -----	31	Greening Nursery Co., Monroe, Mich.
Noyes, G. W. -----	161	Knight & Bostwick, Newark, N. Y.
Nunn, J. H. -----	240	Gold Nursery Co., Mason City, W. Va.
Ortman, W. H. -----	48	Stark Bros. N. & O. Co., Louisiana, Mo.
Parry, Ivor -----	190	Missing Link Apple Co., Clayton, Ill.
Paterson, J. A. -----	126	Kalamazoo Nursery Co., Kalamazoo, Mich.
Pfouts, Lyeurgus -----	124	Missing Link Apple Co., Clayton, Ill.
Pfouts, L. -----	80	Greening Nursery Co., Monroe, Mich.
Plocher, K. W. -----	47	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Price, S. W. -----	62	Missing Link Apple Co., Clayton, Ill.
Radabaugh, H. C. -----	132	J. K. Henby & Son, Greenfield, Ind.
Ramsey, J. L., Jr. -----	225	Stark Bros. N. & O. Co., Louisiana, Mo.
Ran, D. W. C. -----	5	Greening Nursery Co., Monroe, Mich.
Raub, H. A. -----	228	C. L. Van Inwagen, Newark, N. Y.
Reed, Gusta -----	29	Stark Bros., Louisiana, Mo.
Reeder, Albert -----	57	Clark Nursery Co., Waterloo, N. Y.
Richard, W. S. -----	99	Wm. C. Moore & Co., Newark, N. Y.
Ries, John -----	94	Brown Bros. Co., Rochester, N. Y.
Rhodes, Robert -----	260	Stark Bros., Louisiana, Mo.
Roads, C. B. -----	42	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Rockey, Watson -----	155	Chase Nurseries, Geneva, N. Y.
Rodhouse, T. F. -----	154	Allen Nursery Co., Rochester, N. Y.
Ross, Robert -----	119	G. S. Pickett, Clyde, O.
Rupp, Joseph -----	77	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Saunders, J. P. -----	52	Chase Nurseries, Geneva, N. Y.
Sayer, G. A. -----	246	Gold Nursery Co., Mason City, W. Va.
Schaffer, Henry P. -----	21	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Schrage, Victor -----	65	Donaldson Co., Warsaw, Ky.
Schroeder, Chas. -----	254	Wm. C. Moore & Co., Newark, N. Y.
Shade, H. B. -----	68	Alonzo Hartley & Co., Troy, O.
Shellhouse, E. M. -----	157	C. W. Stuart & Co., Newark, N. Y.
Shepler, Barney P. -----	19	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Slates, Wm. -----	95	Brown Bros. Co., Rochester, N. Y.
Smalley, J. A. -----	210	Stark Bros. N. & O. Co., Louisiana, Mo.
Smittle, D. -----	170	Kalamazoo Nursery, Kalamazoo, Mich.
Smith, Philip -----	22	Greening Nursery Co., Monroe, Mich.
Smith, R. J. -----	193	Emmons & Co., Newark, N. Y.
Smith, D. J. B. -----	136	Saddler Bros., Bloomington, Ill.
Smalley, J. A. -----	210	Stark Bros., Louisiana, Mo.
Snyder, Wm. H. -----	74	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Soule, M. F. -----	148	L. L. May & Co., St. Paul, Minn.
South, A. G. -----	249	Stark Bros. N. & O. Co., Louisiana, Mo.
Spellman, Henry T. -----	15	C. M. Hobbs & Sons, Bridgeport, Ind.
Spittler, Levi -----	275	C. W. Stuart & Co., Newark, N. Y.
Springer, Geo. W. -----	102	Brown Bros. Co., Rochester, N. Y.
Stahl, Geo. M. -----	96	Brown Bros. Co., Rochester, N. Y.
Stauffer, Frank -----	277	Greening Nursery Co., Monroe, Mich.
Stocker, W. F. -----	231	Stark Bros. N. & O. Co., Louisiana, Mo.
Strausbaugh, Joseph -----	54	G. S. Pickett, Clyde, O.
Stuckey, S. Z. -----	265	Stark Bros. N. & O. Co., Louisiana, Mo.

## LIST OF CERTIFIED AGENTS—Concluded.

Name of Agent.	Cert. No.	Name and Address of Nursery Represented.
Taylor, Wm. M.-----	232	Knight & Bostwick, Newark, N. Y.
Thomas, Oliver -----	266	Missing Link Apple Co., Clayton, Ill.
Thompson, E. W.-----	115	Saddler Bros., Bloomington, Ill.
Thompson, Michael-----	168	J. K. Henby & Son, Greenfield, Ind.
Tipton, W. E.-----	256	Greening Nursery Co., Monroe, Mich.
Tolle, I. J.-----	98	Brown Bros., Rochester, N. Y.
Towell, Anna -----	160	Emmons & Co., Newark, N. Y.
Trainer, W. C.-----	239	Gold Nursery Co., Mason City, W. Va.
Triplett, Jesse -----	192	Western New York Nursery Co., Rochester, N. Y.
Tucker, S. S.-----	43	Missing Link Apple Co., Clayton, Ill.
Uhlinger, John -----	243	Gold Nursery Co., Mason City, W. Va.
Underwood, Jackson-----	30	Greening Nursery Co., Monroe, Mich.
Underhill, Jackson-----	64	Greening Nursery Co., Monroe, Mich.
Walter, Sylvester-----	34	I. E. Ilgenfritz' SONS Co., Monroe, Mich.
Walker, R. B.-----	150	C. W. Stuart & Co., Newark, N. Y.
Walling, Reuben-----	159	Michigan Nursery Co., Monroe, Mich.
Ward, Chas. B.-----	123	Wm. C. Moore & Co., Newark, N. Y.
Watson, J. L.-----	163	Michigan Nursery Co., Monroe, Mich.
Waugh, Alfred L.-----	260	Stark Bros. N. & O. Co., Louisiana, Mo.
Wead, Wm. R.-----	185	Chase Bros. Co., Rochester, N. Y.
Weeks, C. W.-----	227	C. W. Stuart & Co., Newark, N. Y.
Weiser, Chas. W.-----	181	L. P. Thurston, Kalamazoo, Mich.
Weiser, Chas. W.-----	183	Daniel Sharp & Sons, Clayton, Ill.
Wells, Benton -----	100	Brown Bros. Co., Rochester, N. Y.
West, Ransom -----	215	Greening Nursery Co., Monroe, Mich.
Wightman, O. L.-----	60	Wm. C. Moore & Co., Newark, N. Y.
Wilber, J. A.-----	14	I. E. Ilgenfritz' Sons Co., Monroe, Mich.
Williams, Thomas-----	179	Kalamazoo Nursery, Kalamazoo, Mich.
Willis, R. V.-----	88	Brown Bros. Nursery Co., Rochester, N. Y.
Wilson, Allen -----	16	Stark Bros., Louisiana, Mo.
Wilson, Theodore-----	209	C. W. Stuart & Co., Newark, N. Y.
Yaunce, C. S.-----	133	Saddler Bros., Bloomington, Ill.
Younce, D. M.-----	11	Michigan Nursery Co., Monroe, Mich.
Younce, D. M.-----	12	Saddler Bros. Nursery, Bloomington, Ill.
Young, J. H.-----	13	C. M. Hobbs & Sons, Bridgeport, Ind.
Zackrich, Edward-----	24	Greening Nursery Co., Monroe, Mich.

# LIST OF CERTIFIED DEALERS

## 1909

Name of Dealer.	Cert. No.	Name and Address of Nursery Represented.
Betz, W. A-----	15	{ Storrs & Harrison Co., Painesville, O. Norman & Hacker, Painesville, O. Wetzel Bros., Painesville, O. Cassell Nursery Co., Cleveland, O. Henry Kohankie & Son, Painesville, O. W. B. Cole, Painesville, O.
Biehl, Henry J-----	24	{ Norwalk Nursery, Norwalk, O. John Day, Fremont, O. A. Barnes & Son, Mt. Healthy, O.
Clancy, W. C-----	13	{ Storrs & Harrison Co., Painesville, O. Henry Kohankie & Son, Painesville, O.
Darling, Irvin C-----	27	{ L. Green Sons & Co., Perry, O.
Dellinger, D. M-----	23	{ Willadean Nursery, Warsaw, Ky. Donaldson Co., Sparta, Ky. S. W. Call, Perry, O. L. Green Sons & Co., Perry, O.
Frink, W. M-----	4	{ W. B. Cole, Painesville, O. Henry Kohankie & Son, Painesville, O. A. F. Bernard, Painesville, O.
Graham, C. C-----	26	{ Thomas Meehan & Son, Dresden, Pa. C. M. Hobbs & Son, Bridgeport, Ind.
Guynn, Ellis L-----	3	{ Peter Bohlander & Sons, Tippecanoe City, O.
Harmon, M. O., & Son--	20	{ L. Green Sons & Co., Perry, O. Peter Bohlander & Son, Tippecanoe City, O.
Hatfield, W. P-----	17	{ Storrs & Harrison Co., Painesville, O.
Heskett, W. V-----	5	{ G. S. Pickett, Clyde, O.
Kurtz, Frank-----	7	{ John Seibenthaler, Dayton, O. Frank Hanauer, Dayton, O.
Merchon, M. E-----	25	{ Storrs & Harrison Co., Painesville, O. Baird & Brady, Troy, O.
Riddle & Petterson---	12	{ G. S. Pickett, Clyde, O. Good & Reese Co., Springfield, O. Livingston Seed Co., Columbus, O.
Robinson, Geo. W-----	14	{ Storrs & Harrison Co., Painesville, O.
Robertson, R. R-----	16	{ Storrs & Harrison Co., Painesville, O.
Ross, John J-----	11	{ Michigan Nursery Co., Monroe, Mich.
McCabe, M. L-----	10	{ J. K. Henby & Son, Greenfield, Ind.
Sandusky, H. C-----	1	{ Storrs & Harrison Co., Painesville, O.
Sears, F. E-----	6	{ M. L. Carr's Sons, Yellow Springs, O. Missing Link Apple Co., Clayton, Ill. Storrs & Harrison Co., Painesville, O.
Sharp, W. P-----	2	{ T. B. West, Perry, O. L. Green & Sons Co., Perry, O.
Shattuck, E. A-----	8	{ Storrs & Harrison Co., Painesville, O. T. B. West, Perry, O. W. B. Cole, Painesville, O.
Stone, T. B-----	9	{ Storrs & Harrison Co., Painesville, O. Willett & Wheelock, N. Collins, N. Y. T. S. Hubbard Co., Fredonia, O. L. Green Sons & Co., Perry, O. T. B. West, Perry, O.
South, John-----	21	{ Storrs & Harrison Co., Painesville, O. Xenia Star Nursery, Xenia, O. Sears, Henry, & Co., Geneva, N. Y.

# **LIST OF OHIO NURSERYMEN HOLDING OFFICIAL CERTIFICATES OF FUMIGATION 1909**

Name and Address of Owner.	Name of Nursery.	Cert. No.
Allen, W. A., & Sons, Geneva, O.....	Woodbine Nurseries.....	15
Bailey, Wm. W., Yellow Springs, O.....	Buckeye Orchard Co.....	31
Barnes, M., & Co., College Hill, Cincinnati, O.....		26
Bernard, A. F., Painesville, O.....	Rosemont Nursery.....	18
Bohlender, Peter, & Sons, Tippecanoe City, Ohio.....	Spring Hill Nurseries.....	5
Call, S. W., Perry, O.....		13
Champion, H. J., & Son, Perry, O.....		30
Cassell Nursery Co., Cleveland, O.....		27
Cole, W. B., Painesville, O.....		25
Davis, J. E. & T. Z., Delaware, O.....		33
Day, John & Son, Fremont, O.....	Fremont Nursery.....	21
Eppert, A. A., Amelia, O.....		35
Farmers Nursery Co., Troy, O.....		12
Fairmont Nursery Co., Troy, O.....		22
French, A. B., Clyde, O.....	French Nursery.....	32
Gossett, A. L., Lithopolis, O.....		34
Green, L., & Son Co., Perry, O.....		10
Guynn, Wm. H., Moscow, O.....	Fruit Hill Nursery.....	23
Hathaway, Wick, Madison, O.....		37
Kohankie, Martin, Painesville, O.....		2
Kohankie, Henry, & Son, Painesville, O.....	Ornamental Nursery.....	9
McNary, J. W., Dayton, O.....	Dayton & Xenia Nurseries.....	44
Miami Valley Nursery, Tippecanoe City, Ohio.....		6
Mills, Chas. J., Brookville, O.....		36
Muchmore, W. O., Fremont, O.....	Glenn Hill Nursery.....	19
Norman & Hacker, Painesville, O.....		4
Pickett, G. S., Clyde, O.....		29
Poe, G. H., Kenton, O.....	Poe's Vineyard.....	8
Prudential Nursery Co., Troy, O.....		11
Resler, M. O., Lima, O.....		17
Scarff, W. N., New Carlisle, O.....		20
Storrs & Harrison Co., Painesville, O.....		7
Wagner Park Conservatories, Sidney, O.....		24
Welch, Mark, Painesville, O.....		28
Wetzel Brothers, Painesville, O.....		16
West, T. B., Perry, O.....	Maple Bend Nursery.....	3
Xenia Star Nursery, Xenia, O.....		1

**Eighth Annual Report**  
**OF THE**  
**State Board of Live Stock**  
**Commissioners of Ohio**

---

**1908-1909**

(659)

## PLATE I.

### A SERUM TEST.

No. 180, died of cholera. No. 181, sick. Nos. 182 and 183, serum protected, immune and healthy notwithstanding equal exposure. See descriptive matter on page 695.



## EIGHTH ANNUAL REPORT OF THE STATE BOARD OF LIVE STOCK COMMISSIONERS OF OHIO.

Columbus, Ohio, November 1, 1909.

*To His Excellency, JUDSON HARMON, Governor of Ohio:*

SIR:—The State Board of Live Stock Commissioners has the honor to submit herewith its eighth annual report:

The live stock industry of the state of Ohio represents an investment of nearly two hundred million dollars of capital and over two hundred thousand families are engaged in this business.

The loss from contagious and consequently preventable diseases among domestic animals may be estimated at five million dollars annually, or two and one-half per cent. of the capital invested. Since the profits on farm investments are always moderate, being rarely estimated at over six per cent., the losses due to preventable diseases are startling. In no other industry do such losses occur.

The condition of the live stock industry of an agricultural state like Ohio affects the pocketbook of every citizen of the state. In addition to this, many diseases of animals are communicable to man, and some of them are exceedingly fatal in their effect; it may suffice to mention three well-known diseases, glanders, rabies and tuberculosis, to say nothing of the long list of parasitic diseases like mange or itch and trichinosis and other parasitic worm diseases which owe their origin to animals as intermediary hosts of certain stages in the cycle of development of the parasites.

The importance to man of the welfare and health of animals was recognized by ancient governments long before the beginning of the Christian era, and resulted in the enactment of laws for the control of contagious diseases. In most instances these laws were crude, founded upon superstition and expressed little beyond the fact that danger was recognized and a need was felt for protection.

During the last century, in Europe, the losses from animal plagues such as Rinderpest, anthrax, black leg, scabies, hydrophobia and the infectious swine diseases ran into thousands of millions, and the governments of that continent spent vast sums of money, in addition, for the discovery of means to protect their herds against these decimating plagues.

The United States was the last of the prominent civilized countries to recognize the importance of the protection of its domestic animals against these plagues. Last year three million dollars were appropriated for the use of the Bureau of Animal Industry in the control and eradi-

cation of animal diseases in the United States, and yet this sum is small compared with the expenditures of European governments for similar work. Through dear experience Europe has learned to appreciate the value of its live stock industry.

If timely action had been taken, the United States could today be free from its most dreaded animal plagues. Owing to timely foresight the entire continent of Australia is today free from glanders and rabies, diseases that are costing the United States millions upon millions of dollars. The losses from glanders in Massachusetts, about one-fifth the size of Ohio, conservatively estimated, is one hundred thousand dollars annually. The losses from hog cholera in Ohio probably exceed the million dollar mark every year. The losses from contagious abortion in Ohio dairies have never been estimated; no one but individual dairymen know their own losses, but it is certain that they are a serious drain upon the profits of the dairy.

Tuberculosis is not only gaining a stronger foothold in our dairies every year, but it has now been conclusively shown that the disease is not only transmissible, but is actually transmitted to human beings. The bovine type of tubercle bacillus, which differs distinctly in appearance from that of the human type, is found in a large percentage of children affected with the intestinal form of the disease. Even the conservative Dr. Robert Koch has publicly admitted, at the World's Tuberculosis Congress held in Washington in October, 1908, that such a transmission is possible. Recent observations have shown that tuberculosis is also making serious inroads on our herds of swine. Of a car lot of hogs shipped from Ohio and killed at a Pittsburg abattoir on October 9, 1909, 74 had tuberculosis. Thirty-six carcasses and the heads of all of these animals had to be condemned to fertilizer use, causing the buyers a loss of between four hundred and five hundred dollars. The firm in question made a special request to have this matter investigated by the Ohio board. The results of the investigation which followed have shown that tuberculosis among swine is not an uncommon disease; that it is due primarily to exposure to tubercular cattle, and that the losses resulting from condemnation of affected carcasses in the large abattoirs which maintain federal inspection are quite serious. A number of states make special efforts to control this disease and to prevent these losses. Ohio should be similarly protected. The effect of recent federal meat inspection regulations is already being felt in the refusal of some firms to buy live stock for slaughter except under the conditions that the seller bear all losses due to condemnation of diseased carcasses. Unless the state insures adequate or reasonable protection in this matter the reputation of Ohio as a live stock producing state will suffer.

The question of protecting our herds against the ravages of infectious diseases, important as it is from a commercial point of view, includes also

the protection of human lives. The state of Ohio has expended large sums for the building and equipment of tuberculosis hospitals in various parts of the state. The importance and value of this work is inestimable, but without adequate suppression and control of one of the chief sources of this dreaded disease, our milk, butter, cream and cheese supply, it is incomplete at its very best, and it is unnecessary to emphasize the importance of the liberal support of an efficient live stock sanitary service in a state.

No state in the Union expends for the protection of its animal industry and the control and extermination of animal plagues, more than a fraction of the sums expended by European countries for similar work. The following is a tabular representation of the live stock valuation of some of our more progressive states, and the sums of money appropriated by each for the protection of its domestic animals against contagious diseases:

State.	Live Stock Valuation, U. S. Census 1900.	Annual Ap- propriation for 1909, or last year reported.
Colorado .....	\$49,359,781	\$20,000
Illinois .....	186,856,120	64,420
Idaho .....	21,389,853	12,000
Kansas .....	186,317,248	17,700
Kentucky .....	70,488,187	.....
Maine .....	16,298,422	65,000
Massachusetts .....	14,730,169	77,000
Minnesota .....	86,620,643	111,000
Missouri .....	154,295,363	29,200
Nebraska .....	142,769,629	12,220
New Hampshire.....	10,062,877	15,000
New Jersey.....	16,269,548	37,000
North Dakota.....	41,951,659	99,000
Pennsylvania .....	97,424,119	353,000
South Carolina.....	19,167,229	14,000

Rhode Island, not much larger than two Ohio counties, appropriated \$20,000. Ohio, with a live stock valuation far in excess of most of these states, appropriated \$15,000 for similar work.

This amount is inadequate, and efficient live stock sanitary work commensurate with the great interests involved, is impossible with this sum. Fifteen thousand dollars for the protection against disease of live stock valued at two hundred million dollars located on two hundred thousand farms and scattered over an area of forty thousand square miles, threatened on all sides by invasion of diseases from other states,

is not enough to begin the development of an efficient system of protection and control.

In addition to the fifteen thousand dollars above mentioned, three thousand dollars were appropriated by a special act of the legislature for the development of a recently discovered serum for the successful prevention of hog cholera.

This serum was first produced by Dr. Marion Dorset, of the Bureau of Animal Industry of the United States Department of Agriculture, Washington, D. C. Although entirely successful in an experimental way, the cost of its production was a serious economic factor which threatened to stand in the way of its practical and general introduction among the herds of the state.

Preliminary tests and experiments made by the state veterinarian on his farm at Reynoldsburg seemed to show that it would be possible to produce this serum at a price that would justify its general use on exposed swine. Encouraged by these results the Board, in March, 1909, made a successful effort to induce the legislature to make a small appropriation to continue this preliminary work.

The preparation of protective sera, at its best, is a costly and difficult undertaking, and without suitable quarters for beginning the work, the sum of three thousand dollars seemed insignificant. For these reasons it was thought advisable to make what seemed to be necessary additions to the temporary quarters already equipped on Dr. Fischer's farm near Reynoldsburg, Ohio, which place, in addition to twenty acres of rented pasture land, has thus far served as the Board's experimental laboratory for the investigation of animal diseases.

It was necessary to erect several buildings to serve as laboratory, housing for straw, feed and shelter for experimental animals, a water tank, infection pens, etc. All of the structures are built of wood furnished mostly by a discarded exhibition building at the Ohio state fair grounds, which the State Board of Agriculture turned over for this purpose. Laboratory equipment was purchased out of the regular fund. Since the fund set aside for this work was very limited, every effort was made to be economical in its expenditure and to distribute the serum in a manner which seemed to promise the best results in every way.

From previous work it was estimated that the serum could be produced at an actual cost of twenty-five cents per twenty cubic centimeters, or a dose sufficient to protect a fifty-pound pig. All serum produced was therefore furnished to owners of diseased or exposed swine at this rate. Further experience seemed to bear out the correctness of the assumption that twenty-five cents was, for the present at least, the lowest possible cost price of the serum.

Since March, when the appropriation of \$3,000 became available, approximately thirteen thousand doses of serum were distributed and

## PLATE II.

Fig. 1.—Pig No. 1, infected with hog cholera October 19, 1908, and left without treatment until December 19, 1908, when it was photographed. Died of cholera December 21, 1908.

Fig. 2.—Pig No. 2, infected with hog cholera October 19, 1908, and treated with protective serum at a cost of 25 cents. Kept in same pen with pig shown in Figure 1. Photographed December 19, 1908.

Both pigs weighed the same on October 19th, about 60 pounds each. December 19th, No. 1 weighed 35 pounds, and No. 2 weighed 55 pounds. Similar results were obtained from laboratory tests and field inoculations on over five thousand pigs of different sizes and ages and under varied conditions.

42—B. of A.

applied to exposed and infected swine, and six thousand doses of untested serum were on hand in cold storage. This latter had a cash value of fifteen hundred dollars. The amount disposed of was sold for thirty-two hundred dollars. There is now on hand (November 1, 1909), a balance of \$799.47 in the fund appropriated for serum development.

During the year sixty-six herds, or 5,428 exposed or infected pigs, were treated with serum. Over five thousand of these pigs were saved from death. The total weight of these pigs may be fairly accurately estimated at 650,000 pounds, and at the prevailing average price of hogs, eight cents per pound, their value as pork alone would be at least \$52,000.00. This does not take into consideration the blood or breeding value of many herds that were protected, nor the protection afforded to neighboring herds by the extermination of the disease on any one farm. The value of the thoroughbred herds alone, only a small percentage of the total number treated, exceeds the above amount. The saving to the swine industry through protective inoculation has, therefore, amounted to much more than is indicated by these figures.

No effort was made to advertise or give publicity to this work, and yet the demand for hog cholera protective serum was so great that only a small fraction of the number of applicants could be supplied. The work was necessarily limited to a few localities, being confined mostly to Franklin, Pickaway and Butler counties. The majority of the counties in the state have never been visited for this work, and yet one of these neglected sections of the state reports a loss due to cholera, in a single township, of one hundred thousand dollars.

These statements are made to emphasize the importance of protective inoculation for hog cholera and the need of ample funds furnished by the state to continue the work.

From the nature of the work and the necessary expense attending the preparation of this serum it cannot, for some time to come, be profitably produced by private enterprise. On the other hand, the field offers many inducements for the unscrupulous marketing of worthless material.

After years of research and investigation we have found an effective preventive for hog cholera. The state government alone is in a position to supply this remedy to the farmer at terms which make it possible, and safe, to use it.

The actual annual loss from this disease in Ohio may be conservatively estimated at one million dollars. It has now been demonstrated beyond a doubt that this entire loss is preventable. Individual effort in this direction is practically fruitless—the herd of every owner is at the mercy of surrounding conditions uncontrollable except by some central authority. The state government is, therefore, the only possible source of effective protection and relief. A laboratory ample for the suc-

cessful undertaking of this work can be equipped for \$75,000. This would cover the cost of a two hundred acre farm at about \$25,000, and buildings, with equipment, for \$50,000. This would represent a permanent investment for the state, would be practically self-sustaining and would mean the saving to the state of a sum of one million dollars or twenty times the original investment, every year, and this from hog cholera alone.

In addition to its use as a hog cholera serum laboratory, this plant could and would be used for the study and investigation of other animal diseases. No live stock sanitary commission can be expected to do satisfactory or effective work without such a laboratory. Similar laboratories have already been erected in other states and new ones are continuing to spring up, and there is no question about the imperative need of these institutions.

Satisfactory investigations and control of such diseases as tuberculosis, rabies, mange, foot rot, glanders, epizootic lymphangitis, contagious abortion, parasitic worm diseases, etc., cannot be undertaken without a proper equipment for the work.

The state has spent over \$200,000 for the equipment of a college of veterinary medicine, now at the head of the list of similar institutions in America. This school is maintained at an annual expense of perhaps not less than fifty thousand dollars. The best graduates of this school, almost as soon as they receive their diplomas, leave Ohio and accept remunerative positions with the federal government and with other states. It seems anomalous or inconsistent that our laws and institutions should favor such conditions, yet it is true that they do so. Ohio has the best school for the education of scientific veterinarians and sanitarians on the continent of North America, yet its laws are such that no inducements are offered to keep its trained men at home. On the other hand, Ohio has for years been the dumping ground of diseased live stock and incompetent veterinarians of other states.

Ohio needs better live stock laws, better laws regulating the practice of human and veterinary medicine and better facilities for up-to-date live stock sanitary work.

Every year the state is spending some money to compensate owners for animals affected with dangerously contagious diseases (glanders and tuberculosis) that have been destroyed by order of the Board of Live Stock Commissioners for the protection of other live stock. While this has been done, more diseased live stock than has been destroyed has been permitted to be shipped in from other states. The Board has been powerless to prevent this.

On March 23, 1909, upon special recommendation from this Board, setting forth reasons for its action, you issued your quarantine proclamation prohibiting the importation of dairy and breeding cattle into Ohio

unless accompanied by properly executed certificates of tuberculin tests. Special arrangements had been made with the Bureau of Animal Industry of the United States Department of Agriculture to have said bureau co-operate with this Board in the enforcement of regulations made under authority of your proclamation.

Tuberculin testing stations were established at the Cincinnati Union Stock Yards and at the Cleveland Union Stock Yards. This was done at the expense of the stock yards authorities, who entered into willing co-operation with the Board in this undertaking. We were also assisted by the federal inspectors stationed at these points. Dr. A. D. Melvin, Chief of the Bureau of Animal Industry, delegated two veterinarians that were paid by the United States Department of Agriculture, to devote their entire time to this work. Beginning July 2, 1909, every dairy cow and all breeding cattle shipped through these yards and destined for Ohio points were subjected to careful tuberculin tests. This resulted in the condemnation of eight cows on account of tuberculosis, out of four hundred and eighteen animals tested, in a period of two weeks. It is possible that these cows, had each been bought by a different man, would have infected so many Ohio herds.

The effect of these regulations was to divert all suspicious animals away from Ohio markets. Ohio buyers flocked to Cincinnati and Cleveland for tuberculin tested cattle, which suddenly commanded a better price that was willingly paid. These new rules had not been in effect long when some Cincinnati lawyers discovered that the proclamation was too sweeping in its effect, not for the good of the people, but that it went beyond the technical provisions of our laws. Injunction proceedings were threatened and the attorney general advised the Board to suspend the enforcement of its regulations until our laws could be adjusted to permit the enforcement of modern live stock sanitary measures.

The effect of this was to reopen Ohio as a dumping ground for the tubercular cattle of other states. In the meantime, the state of Kentucky saw the effect of our regulations in Ohio, and enforced similar regulations in that state. As a result of Kentucky's action, conditions in Ohio are now worse than ever. Suspicious and tubercular dairy cows of Indiana and Illinois can no longer be disposed of in Louisville. All cattle sold there must first be tuberculin tested to determine their freedom from tuberculosis. As a result, all shipments of a doubtful character are diverted to Cincinnati. There is a general understanding among stock dealers that the Cincinnati Union Stock Yards will accept anything that would be refused in Louisville, Kentucky.

The state should control the sale and use of tuberculin and mallein. These substances were discovered in 1891 and 1892, respectively. In veterinary medicine they are used to determine the presence of tuberculosis in cattle and glanders in horses, and are the best and most accurate diag-



nostic agents ever discovered. Without them modern live stock sanitary control work would be impossible. Their indiscriminate sale and use by incompetent or dishonest persons enables the perpetration of fraud and trickery that often results in more harm than benefit. For example: By the use of tuberculin it is possible to detect incipient tuberculosis in an apparently healthy animal. This is the basis of all modern systems for tuberculosis control. The subcutaneous injection of tuberculin into a tuberculous animal produces a characteristic rise of temperature known as a tuberculin reaction. Animals free from tuberculosis do not give this reaction. One such injection renders a tuberculous animal immune for a variable period to the effects of a second injection. Sometimes this immunity lasts several weeks. During this period the disease is successfully masked and no means at our command can with certainty detect it.

Unscrupulous dealers make use of this knowledge by treating tubercular animals with tuberculin, thus temporarily immunizing them against its effects and then offering them for sale as healthy animals, guaranteeing them free from tuberculosis as indicated by the tuberculin test. This trick is known as "plugging."

Tuberculosis is a highly infectious disease, a fact that is generally known, though not openly admitted, by all progressive dairymen and stock dealers. As a result many breeders will buy nothing except tuberculin tested cattle or such as are sold under a guarantee that they are free from tuberculosis as indicated by a tuberculin test within a specified period after the date of purchase. In view of the foregoing explanation the possibilities for fraud in such cases are evident.

The states of Kansas, New York and Wisconsin have this year passed laws which regulate the use of tuberculin by requiring persons who intend to use the same to obtain permits from the authorities charged with the control of animal diseases. The state of New York requires in addition that accurate reports of all tuberculin sold or used in the state of New York be furnished to the same authorities. The enforcement of similar regulations are seriously considered by other progressive states.

On account of defects in our laws the courts have enjoined the Board from enforcing its regulations for the control of glanders in Montgomery county. The result is that Montgomery county has become a breeding place for the disease, and the horse owners of surrounding counties suffer serious losses from the selling of diseased horses out of the infected territory. Knowledge of the existence of this condition is based upon reports of veterinarians in the employ of this Board, local veterinarians of Montgomery county and federal inspectors in the employ of the United States Bureau of Animal Industry.

In the state of Massachusetts, one-fifth the area of Ohio and with about the same proportion of the number of horses in this state, the

average number of horses killed on account of glanders is about seven hundred head annually.

In North Dakota, in a period of little over one year, over fourteen hundred horses were killed, at a cost to the state of seventy thousand dollars.

In Minnesota, which state prides itself on the efficiency of its live stock sanitary board, three hundred and fifty-three horses were officially destroyed on account of glanders in the year ending July 31, 1909. This is only about half the number destroyed in the previous year.

A few years ago over two hundred horses were killed at the expense of the state of Pennsylvania in the city of Philadelphia alone.

In the year of 1903, the horse owners of Kansas City suffered a loss of at least six hundred animals from this disease. In one stable containing one hundred and eighty-five horses, one hundred and eleven were found affected with glanders.

Glanders is the most dangerous and fatal disease of the horse, and is communicable and equally fatal to human beings. Yet the Dayton courts enjoined the Board of Live Stock Commissioners of Ohio from enforcing modern methods of glanders control in Montgomery county. One of the numerous alleged grounds for the action of the court was: "That horses possess naturally a considerable immunity to the disease, and when the disease has been allowed to run unchecked it never assumed national importance, nor is it to be compared in danger and destruction with other diseases among animals classed as infectious or contagious;" etc.

The Board respectfully recommends that the passage of an effective modern live stock sanitary law receive your approval during the session of the next general assembly. With your permission, suggestions for an outline of such a law will be presented for your consideration.

During the year the Board has had in its employ five veterinarians; a state veterinarian, an assistant state veterinarian, an animal pathologist and two assistant veterinarians; also one laboratory assistant, one laborer and a stenographer. In addition to this, a number of practicing veterinarians in various parts of the state have been employed at different times for special field work.

Three hundred and eighty-seven inspections and field investigations of reported outbreaks of contagious diseases were conducted. An appended map indicates the localities, by counties, where these investigations were made. A similar map showing the extent of the previous year's work is supplied for comparison.

## TUBERCULOSIS.

Eighty-one herds of cattle, comprising eleven hundred and eighty-

nine animals, were tested for tuberculosis at the request of owners. Of this number one hundred and ninety-five, or sixteen and four-tenths per cent., reacted to the test and upon post-mortem examination were found to be tuberculous. This includes the twelve herds owned by state institutions and tested at your request, but does not include the tests of four hundred and eighteen cattle at the Cincinnati and Cleveland stock yards, of which eight were condemned on account of tuberculosis.

The herds of the state institutions comprised a total of four hundred and eighty-nine animals, of which eighty-three reacted to the tuberculin test. Special reports of these tests under dates of May 2, June 8 and August 1, 1909, respectively, have already been transmitted by the State Veterinarian. All of the reacting cattle belonging to state institutions have been disposed of by slaughter, except six head at the Ohio Soldiers' and Sailors' Orphans' Home at Xenia, and four head at the Dayton state hospital, all registered Holstein-Friesian cattle, which have been kept in quarantine pending some joint action to be taken by the respective boards of these institutions and the Board of Live Stock Commissioners.

These animals are all of exceptional value on account of their selected breeding, and it was proposed to turn them over to the Board for the purpose of testing the practicability of raising healthy offspring from tubercular cattle, as a basis for the introduction into this state of an effective system of tuberculosis control. The enforcement of such a system, which has been in practical use in Denmark for fifteen years, would mean the saving of hundreds of thousands of dollars to the dairy interests of Ohio. Denmark, a country with about one-half the population of Ohio and of one-third the area of our state, has found it profitable to expend 100,000 Kronen (\$25,000) annually since 1898 for this work.

The farm and pathological laboratory recommended for hog cholera serum work could be used in this connection with practically no additional expense.

#### GLANDERS IN HORSES.

Fifteen investigations of reported outbreaks of glanders were conducted and eight horses were destroyed on account of affection with the disease. In addition, thirty-nine cases of disease were reported by veterinarians. These reports were not followed by special investigations, owing to the fact that the animals in question were destroyed under the direction of local veterinarians, or they were reported too late to make an investigation before the date of this report.

A number of unofficial reports on the presence of the disease in Montgomery county were received, but no investigations followed.

#### EPIZOOTIC LYMPHANGITIS.

Epizootic lymphangitis is an infectious disease of the horse, and is

of especial interest on account of its general resemblance to certain forms of glanders, viz., farcy, or cutaneous glanders.

The disease is characterized by the appearance of nodules and ulcers in the skin on various parts of the body, particularly on the inside of the hind legs. In its early stages the disease will yield to skillful treatment. Later stages are practically incurable. On account of the contagiousness of the disease in this stage, affected animals, if the situation demands it, are ordered destroyed and, if the animal has any value at the time of its destruction, compensation is recommended by the Board.

On account of the close resemblance of the disease to glanders, all suspected cases should be reported without delay to the Board of Live Stock Commissioners, so that any doubt as to the nature of the disease may be removed by an investigation.

One animal affected with this disease was destroyed during the year.

### SHEEP SCAB (*Scabies*).

During the year sixty special investigations of outbreaks of scab among sheep were conducted.

Native Ohio sheep are free from scab, but the disease is common in some western states. Nearly all eastern shipments of these sheep pass through the Chicago yards, where Ohio feeders buy heavily.

For some reason the federal regulations requiring the dipping of all sheep shipped interstate from these yards for feeding or breeding purposes have not been as effectively enforced as formerly, and in some instances, buyers have succeeded in evading the regulations. Investigations have shown that practically all infections, in Ohio, could be traced to the Chicago yards.

The Board was enabled to locate these outbreaks through the efficient co-operation extended by the Bureau of Animal Industry of the National Department of Agriculture, whose inspectors, stationed at the various live stock markets in the United States, reported to the office of the State Veterinarian all infected shipments of Ohio sheep.

From November, 1908, to November, 1909, federal inspectors reported the shipment of 2,893 scab-infected sheep from Ohio. Investigations following the receipt of these reports led to the discovery of 2,357 sheep still at the points of origin of these shipments. These sheep were quarantined and ordered dipped according to the established regulations of the Board.

Had it not been for the prompt and effective measures enforced in these cases, serious inroads would have been made on our flocks, with the result that the entire state would have been quarantined by the Na-

tional Department of Agriculture against interstate shipments of sheep, as has been the case with Kentucky.

Assurance has been given by the National Bureau of Animal Industry that federal regulations requiring the dipping of sheep at Chicago, which are destined for Ohio, will be enforced with increased vigor.

### FOOT ROT.

During the past two years efforts have been made to co-operate with the National Bureau of Animal Industry in locating outbreaks of foot rot among the flocks of Ohio and aiding the owners to get rid of the disease.

In the course of this work it has been found that this disease is more prevalent in Ohio than has been generally believed, and it is urged that more attention be given by farmers and sheep men to report the suspected existence of this disease to the Board so that measures can be recommended for its extermination.

As far as the funds of the Board will permit, all reports of the existence of foot rot are investigated by special trips to the infected farms. Owners are advised to keep animals isolated, and instructed as to their treatment, disinfection of premises, etc.

### NODULE DISEASE.

Nodule disease has been reported from different sections of the state, twenty-nine counties containing farms infected with the disease. Last year only twenty-six counties were reported.

Nodule disease (or nodular disease) is caused by an intestinal parasitic worm (*Oesophagostoma Columbianum*), which causes the appearance of various sized nodules (hence the name) in the walls of the large and small intestines of infected animals.

Young pregnant ewes seem to suffer more than other sheep. The disease frequently terminates in death, and in other cases it permanently affects the health of the animal. Once introduced on a farm, it is difficult to exterminate. One reason for this is that the life history of the parasite is not thoroughly understood. Its history from the passage of the eggs of the mature worm with the feces, to reinfection of a new host with the undeveloped or embryonic worm, is not definitely known. The mature worms can be eliminated from the bowels by means of worm remedies.

As a preventive, infected pastures should be subjected to cultivation in alternate years. Surface waters and wells receiving surface drainage should be avoided. Above all, care should be observed in the purchase of new stock to prevent infection of farms free from the disease.

## RABIES.

Rabies occurs in all of our domestic animals, as well as in man. The disease has become quite prevalent in Ohio, and the Board is frequently requested to assist local authorities in controlling outbreaks. Whenever possible, reports of outbreaks are investigated and measures taken to check the spread of the disease.

When outbreaks occur the owners of affected animals, as well as local authorities, should report them to the Board at once, so that the persons in charge of exposed animals may be instructed as to their care or disposition.

All dogs in the community should be muzzled at once. Exposed dogs should be killed. Exposed horses are ordered quarantined for a period of three months from the date of exposure; cattle are quarantined four months; sheep and pigs three months. After these periods the danger of development of the disease is practically over.

In certain instances exposed pigs, on account of their vicious and dangerous nature when affected with the disease, may be ordered destroyed and recommendations for compensation is made by the Board.

Treatment or recovery of affected animals is out of the question. They should, therefore, be destroyed without delay. No compensation is recommended for such animals.

A bulletin on "Rabies in Ohio," addressed to health officers, township trustees, etc., was published recently. Copies of this are sent to all interested applicants.

## MANGE IN HORSES.

Mange in horses in Ohio occurs chiefly as a result of exposure to infected horses shipped from the Western states. It is a very troublesome and exceedingly contagious disease of the horse, running a rather slow course, and, if neglected, resulting in death from exhaustion.

The disease is curable and responds readily to proper treatment. All infected horses should be quarantined and treated until a cure has been brought about. The remedy for this disease, recommended by the National Bureau of Animal Industry as having given the best results, is the lime and sulphur wash, prepared as follows:

"Place one-half pound of unslacked lime in a bucket or kettle. To this add enough water to form a paste. Into this paste sift one and one-half pounds of flowers of sulphur and stir the mixture well. Place the sulphur-lime paste in a kettle, with about three gallons of water, and boil. The boiling should be continued until the sulphur disappears, or almost disappears, from the surface, which will require from one to three hours. The solution is then of a chocolate or liver color. Water

may be added as necessary to replace that which evaporates during boiling. Pour the mixture and sediment into a bucket and allow two or three hours for the sediment to settle, then carefully dip off the clear liquid, taking care not to disturb the sediment. Place this liquid in a wooden receptacle or keg that can be closed tightly to exclude the air, or a glass receptacle, such as a large demijohn. To the clear liquid thus dipped off add enough water to make six gallons. The sediment should be thrown away. This mixture can be used freely for washing the horse. As it stains the hands of the person who uses it (although it does not harm otherwise, and the stain does not last long), it may be applied with a sponge attached to the end of a stick, or rubber gloves may be worn. About one-half of the body of the horse may be covered at a time; that is, in a single day, and the application should be repeated at intervals of two or three days as long as may be necessary. In the West, where many horses are to be treated, they are dipped in lime and sulphur wash in special vats.

"This wash should be applied with a sponge to the diseased area and to the surrounding apparently healthy skin. It is well to apply a little, but not much, friction, in order to cause the wash to soak through the scurf and accumulation, and to penetrate into the burrows and fissures in the skin. The wash should be applied at intervals of two or three days until the cure is complete."

#### ACTINOMYCOSIS. (Big Jaw, Lump Jaw.)

Actinomycosis appears sporadically among cattle in practically all portions of the state. Its greatest prevalence seems to be in low, rich bottom land. Horses, sheep, swine, dogs and cats are occasionally affected. The fact that an effective remedy for the disease has been found makes its occurrence of less importance from a "sanitary police" point of view than formerly. Actinomycosis occurs also in human beings, but the danger of direct infection from affected animals, if it occurs at all, must be very slight.

The cause of the disease is a vegetable parasite, *Actinomyces bovis*, which grows on various grains and grasses, but notably on the heads of barley. With the peculiarly constructed awns of this plant, which work their way into the tissues of the animal, sometimes through previously existing wounds, this parasite may gain a foothold and, by further development, produce the tumors characteristic of the disease. As the name implies, the jaw is the principal seat of the disease, but other parts of the body, tongue, throat, lungs, udder, skin or lymphatic glands may also become affected.

Animals affected with lump jaw should be put under the care of a veterinarian. As far as the use of meat from affected animals with local

forms of the disease is concerned, although it cannot be said that any great danger attends its use as food, the practice is attended with the same objections as is the use of meat from animals suffering from any other disease, and should therefore not be encouraged.

When the disease is limited in extent, and strictly local, the carcasses of animals are considered fit for human food, provided no emaciation exists, and provided that the affected parts (the entire head, when the jaw is the seat of the disease) be removed under the direction of a competent meat inspector.

Requests are sometimes received from local boards of health to examine animals that are reported to be effected with actinomycosis. Whenever possible these requests are complied with, but in most cases persons making the requests are advised to obtain the services of local veterinarians, the time of the force of the Board being fully occupied with matters pertaining to the more dangerous, infectious and contagious diseases.

#### INFECTIOUS KERATITIS. (Sore Eyes.)

During the warm season, especially in the latter part of the summer, this infectious eye disease is frequently reported. It affects the eyes of cattle, and usually remains strictly localized. The course of the disease is short and usually terminates in perfect recovery within a few weeks. In a small per cent. of cases there may be permanent impairment of sight, or even complete loss of one or both eyes.

On the whole, the disease is not considered a dangerous one, the loss from it, as a rule, being confined to slight and temporary loss of flesh by the afflicted animal.

Owners reporting the existence of the disease in their herds are advised to isolate affected animals, and to treat their eyes with an antiseptic wash. No further regulations for the control of this disease are advised by the Board.

A similar disease affecting sheep is also occasionally reported to the Board. The measures recommended for the prevention and treatment of the disease in cattle are indicated for these animals.

The appended maps give information regarding the distribution of the prevalent infectious and contagious diseases of domestic animals, the localities visited by the State Veterinarian and his assistants, and the location of licensed veterinarians in the state of Ohio.

During the year eight horses, appraised at six hundred and thirty-two dollars and fifty cents (\$632.50), were ordered destroyed by the Board on account of infection with glanders.

One horse appraised at fifty dollars (\$50) was ordered destroyed on account of infection with epizootic lymphangitis, and eighty-one head of dairy and breeding cattle, appraised at four thousand two hundred



and seventy-two dollars and fifty cents (\$4,272.50), were ordered destroyed on account of tuberculosis.

The Board respectfully recommends that the owners of the destroyed horses be compensated as provided by law, and that the owners of the condemned dairy cows receive one-half of the appraised value of the same as compensation for their losses.

Following is an itemized list of all animals destroyed by order of the Board. The list includes the names and addresses of the owners and the appraised value of the animals:

## GLANDERED HORSES.

No.	Color and Sex.	Name and Address of Owner.	Appraised Value.
1	Black mare.....	Thomas Tyner, Marion, O.....	\$65 00
2	Brown gelding.....	C. S. Hogarth, Akron, O.....	50 00
3	Bay gelding.....	Roche Burrell, New Lexington, O.....	75 00
4	Bay mare.....	John Farbean, New Lexington, O.....	137 50
5	Brown mare.....	Theodore Curtis, Fletcher, O.....	50 00
6	Sorrel gelding.....	F. A. Edminson, Casstown, O.....	100 00
7	Roan mare.....	Samuel Knoop, Casstown, O.....	75 00
8	Sorrel mare.....	Thomas Hunter, Franklin, O.....	80 00
Total.....			\$632 50

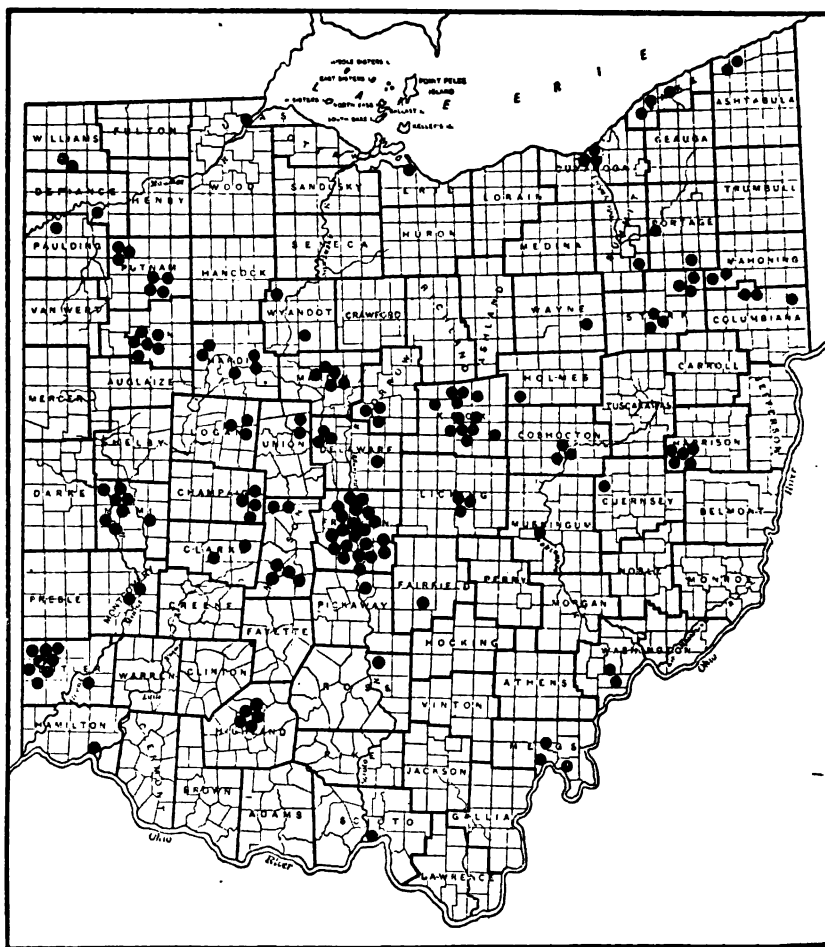
## HORSES AFFECTED WITH EPIZOOTIC LYMPHANGITIS.

1	Black mare.....	E. J. Miller, Berlin, O.....	\$50 00
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## TUBERCULAR CATTLE.

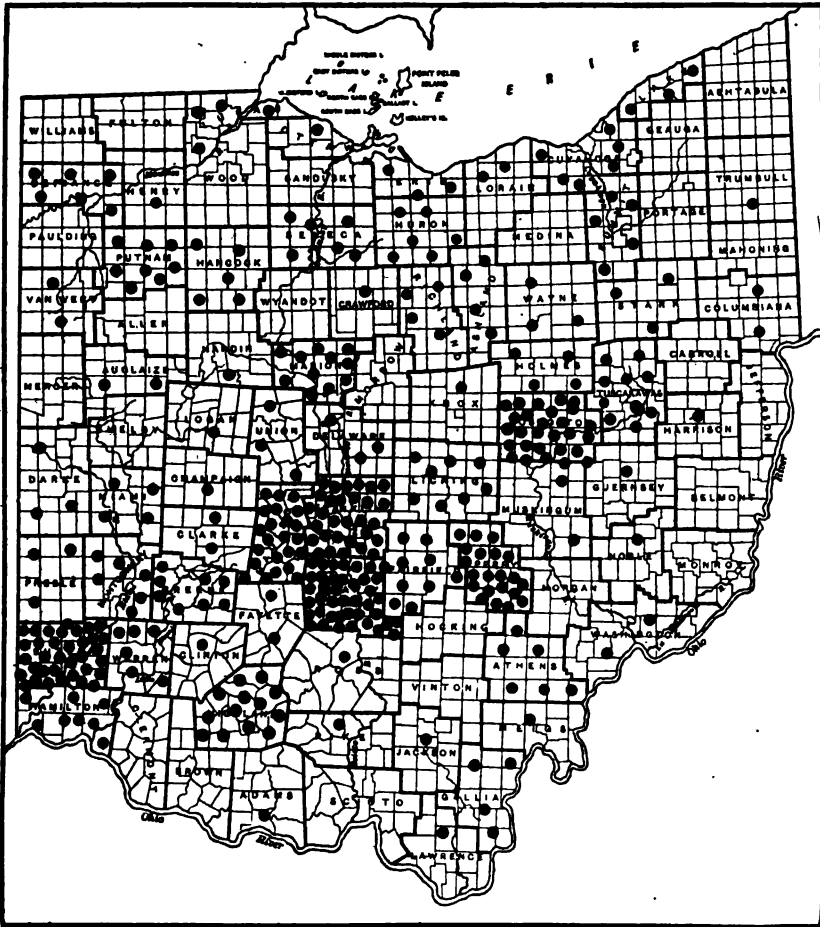
No. of Herds.	Name and Residence of Owner.	No. of Cattle.	Appraised Value.
1	G. A. Carmack, Ulrichsville, O.....	1	\$47 50
2	Ernestine Clague, Hudson, O.....	2	87 50
3	Ed. Vaughan, Boston, O.....	18	870 00
4	A. A. Peasley, Columbus, O.....	1	47 50
5	H. W. Snow, Boston, O.....	21	1,010 00
6	Fred G. Ganderton, Bedford, O.....	6	365 00
7	Louis Seitter, Dennison, O.....	1	50 00
8	Jay C. Smith, Castalia, O.....	15	950 00
9	J. P. Griffin, Dennison, O.....	1	30 00
10	R. M. Roberts, South Charleston, O.....	2	150 00
11	Wayne County Children's Home, Wooster, O.....	2	90 00
12	William Mitchell, Marietta, O.....	1	75 00
13	Ira C. Krupp, Sandusky, O.....	4	200 00
14	James L. Huston, Oxford, O.....	2	100 00
15	Orville Powers, Oxford, O.....	2	100 00
16	J. W. King, Oxford, O.....	1	50 00
17	I. T. Bryant, Oxford, O.....	1	50 00
Total .....			\$4,272 50

## LOCATIONS VISITED FOR INVESTIGATIONS, 1907-8.



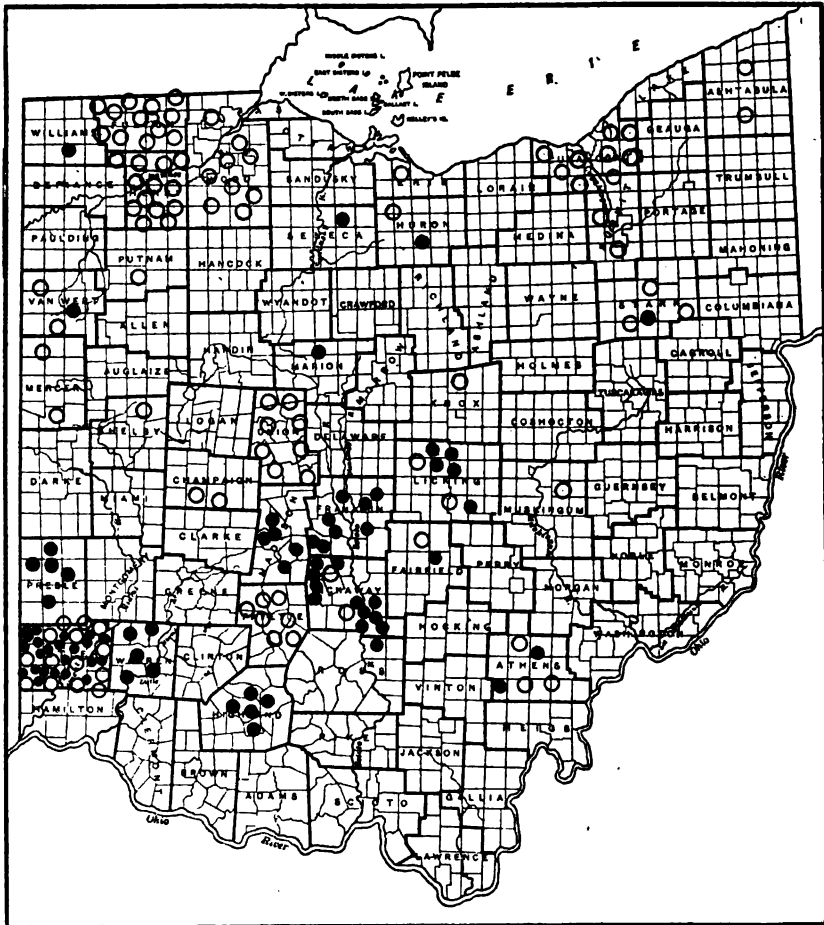
The black spots indicate the townships where trips were made and investigations were conducted by the Board in 1907-8.  
Total—159 investigations.

## LOCATIONS VISITED FOR INVESTIGATIONS, 1908-9.



The black spots indicate the townships where trips were made and investigations were conducted by the Board in 1908-9.

Total—337 investigations, not including a single investigation for rabies, of which 132 outbreaks were reported.

HOG CHOLERA (*Swine Plague*).

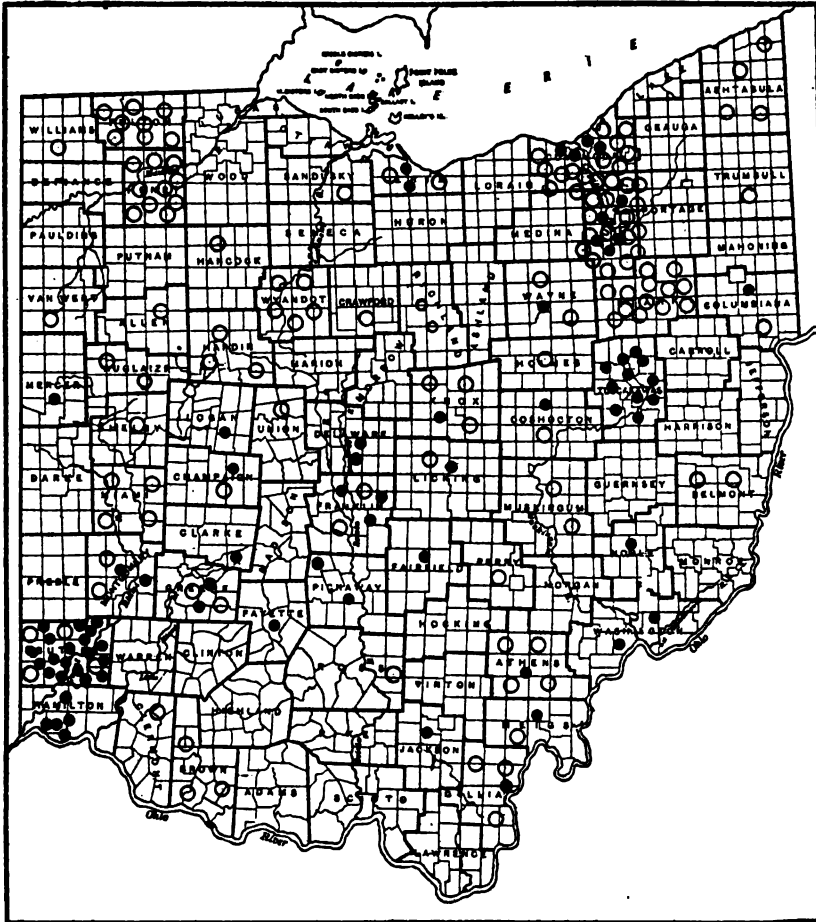
The black spots on the map indicate localities from which hog cholera was reported and visited for the purpose of making investigations or serum inoculations.

The circles indicate localities where the disease was reported to exist or from which applications for serum treatment were received.

Annual loss from cholera, \$1,000,000.00; loss from a single township in Defiance County in 1908, \$100,000.00.

Serum treatment for 5,428 infected or exposed pigs administered by the Board in 1909. An absolute success as a preventive measure.

# TUBERCULOSIS. IN CATTLE.



The black spots on the map indicate the localities where tuberculin tests were conducted by the Board during the past year.

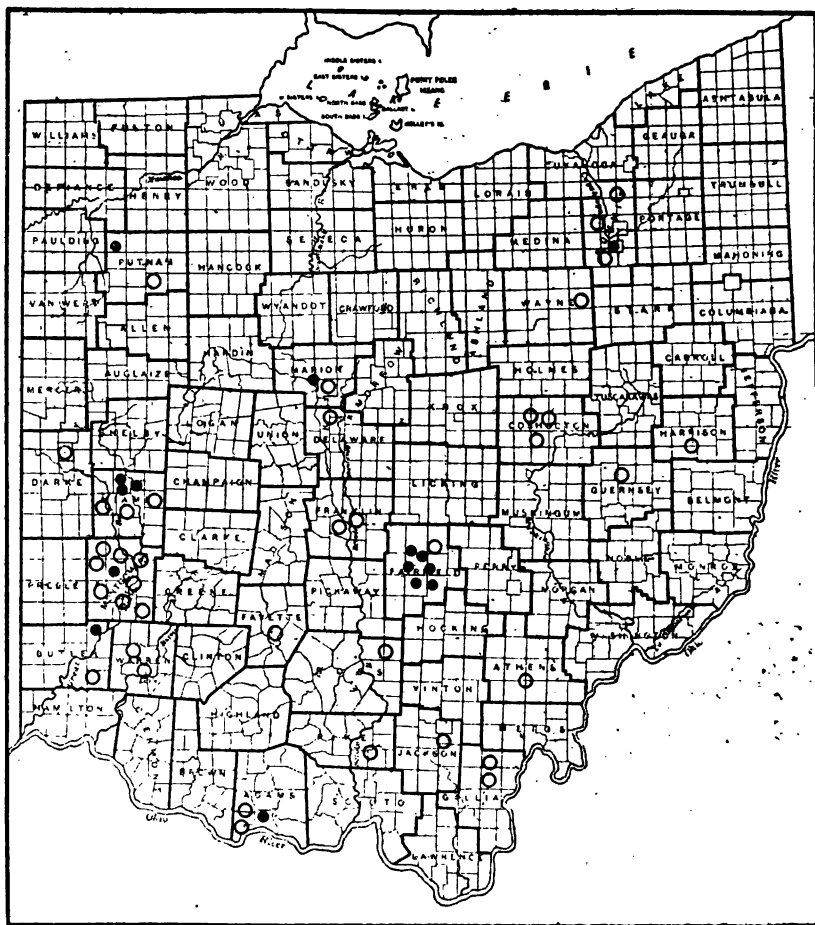
The circles indicate the counties from which the disease was reported by local veterinarians and owners of herds.

Upon request of owners 1,189 cattle were tested for tuberculosis. Of this number 196 reacted, and upon post-mortem examination were found tubercular. This is 16.4 per cent. of the number tested. The owners of 81 head of cattle which were appraised at \$4,272.50, expect the state to pay them for their losses.

In the absence of adequate laws at present, tubercular cattle are being shipped into the state faster than the funds at the disposal of the Board will permit their destruction.

See pages 668 and 670.

# GLANDERS, OR FARCY. IN HORSES.



The black spots on the map indicate localities visited for the investigation of reported outbreaks of glanders.

The circles indicate localities where reports of the disease were disposed of by correspondence or investigation by local veterinarians.

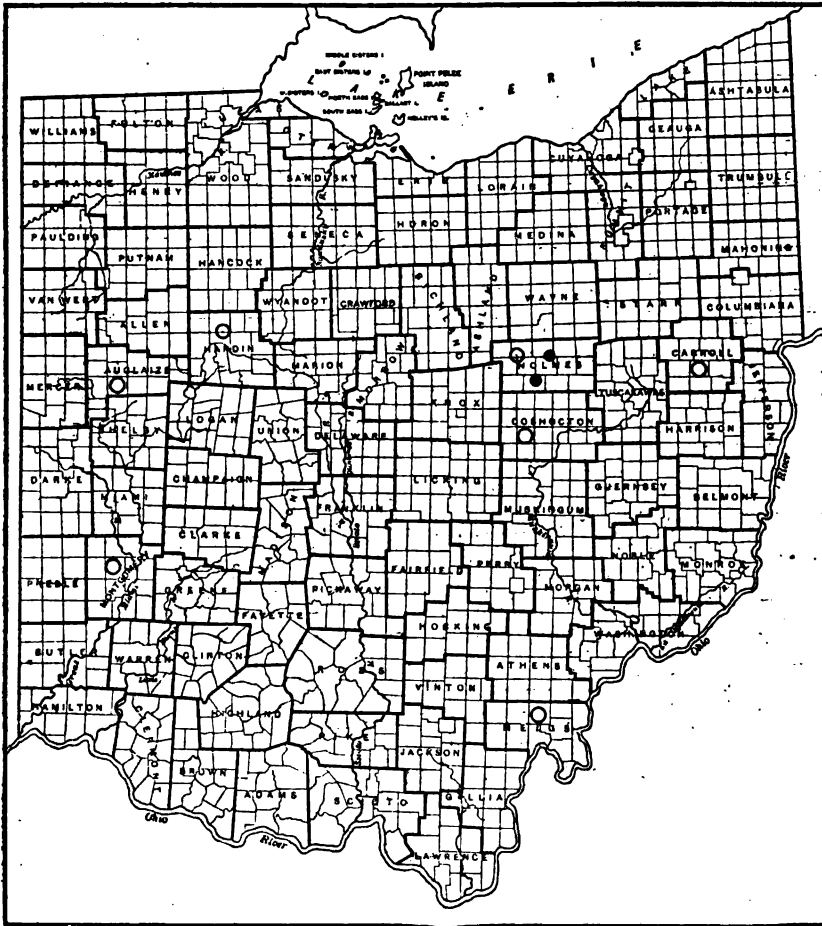
Glanders is now beginning to increase in Ohio.

Minnesota was once free from this disease. Last year the state authorities killed 353 horses.

Thirty years ago the disease was less prevalent in North Dakota than it is in Ohio today. Last year North Dakota lost over 1,400 horses from this disease besides being injured as a horse producing state.

Ohio needs up-to-date live stock laws and money for its Board of Live Stock Commissioners to enforce them. See pages 670 and 671.

# EPIZOOTIC LYMPHANGITIS. IN HORSES.

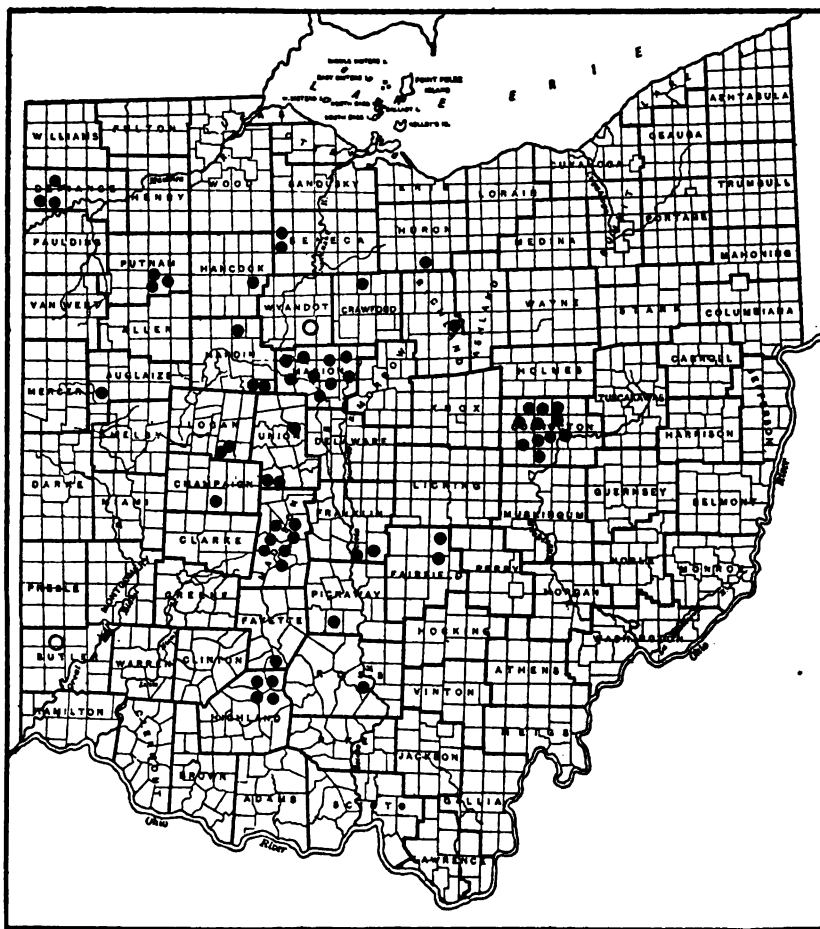


The black spots on the map indicate localities where investigations were made by the Board.

The circles indicate localities from which correspondence regarding the disease was received.

This disease is new in Ohio. Timely enforcement of proper repressive measures will keep the loss at a minimum and result in the ultimate extermination of the disease. If neglected it will soon be common in all parts of the state. See page 671.

# SCAB. IN SHEEP.



The black spots on the map indicate the localities where the disease was located during the year.

The circles indicate location of reported outbreaks not yet investigated.

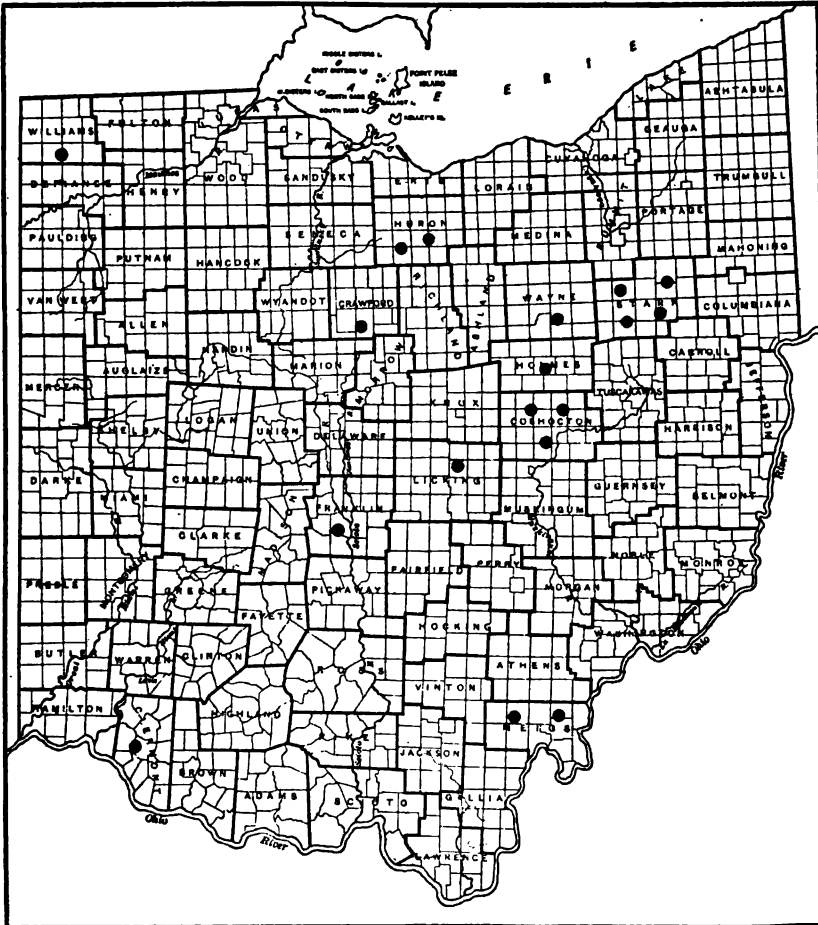
Native Ohio sheep are free from scab. Nearly all infections in Ohio can be traced to the Chicago stock yards. The loss from this disease to Ohio sheep raisers is at least \$20,000 a year. The cost to the state almost \$3,000. In some Western states the losses have been near the million dollar mark. The disease is getting a stronger foothold in Ohio every year.

The enforcement of good laws will stamp the disease out of existence. There is no theory about this. Other states do it.

See page 672.



# FOOT ROT. IN SHEEP.



The dark spots on the map indicate localities from which outbreaks of the disease were reported.

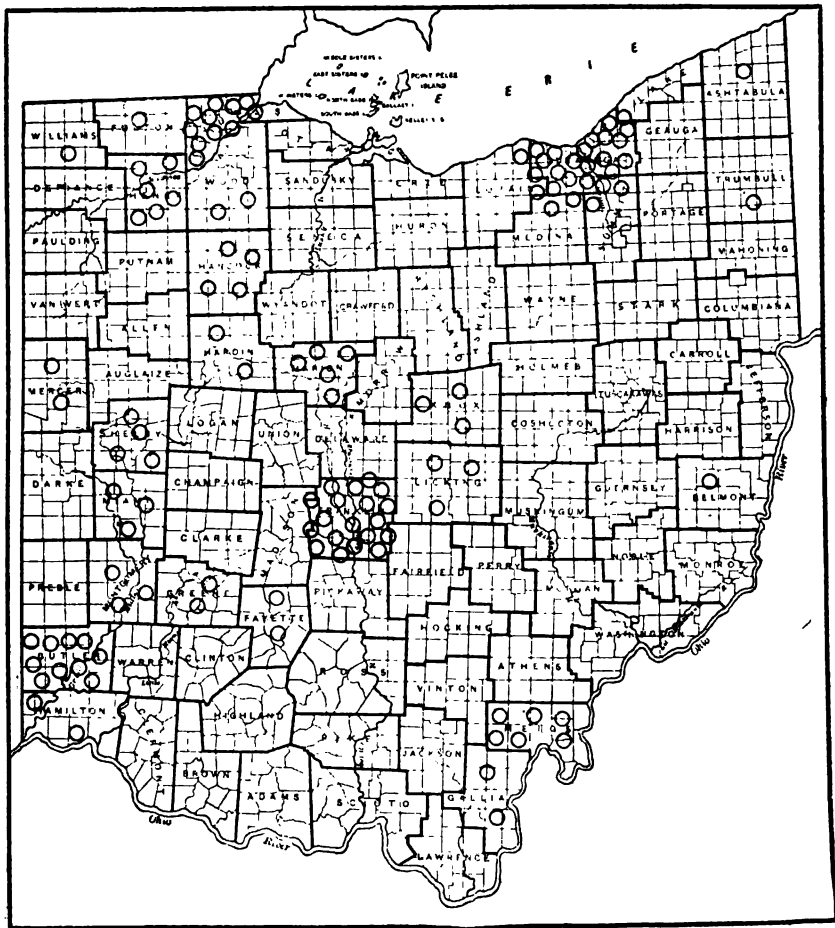
While this disease is entirely preventable, the losses from the same are quite serious.

The fund at the disposal of the Board did not permit the making of a single investigation of reported outbreaks in 1909.

See page 673.



# RABIES. IN ALL DOMESTIC ANIMALS.



The circles show the localities from which the disease was reported by veterinarians and health officers.

The disease was reported from 132 localities. It is the most dangerous and most dreaded disease of man or animal. No disease is more easily and surely controlled. Norway, Sweden, the entire continent of Australia and the Island of Great Britain have been freed from this disease.

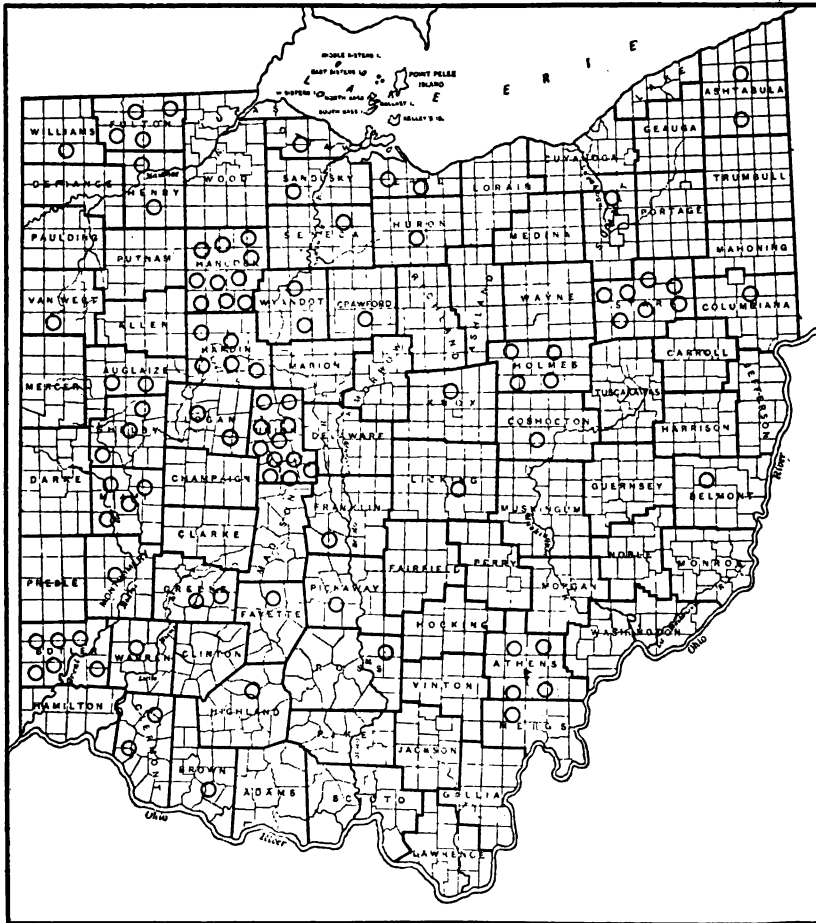
Ohio has no laws providing for the control of rabies. Well meaning but misinformed humane societies spend money and energy in fighting every attempt of local or state authorities to enforce adequate repressive measures, the muzzling of dogs. Dogs are the common and practically the disease. See page 674.

Die means of spreading and perpetuating

Ohio must take up this work or fall behind its sister states in modern live stock sanitary work.

ANTINOMYCOSIS (*Big Jaw—Lump Jaw*).

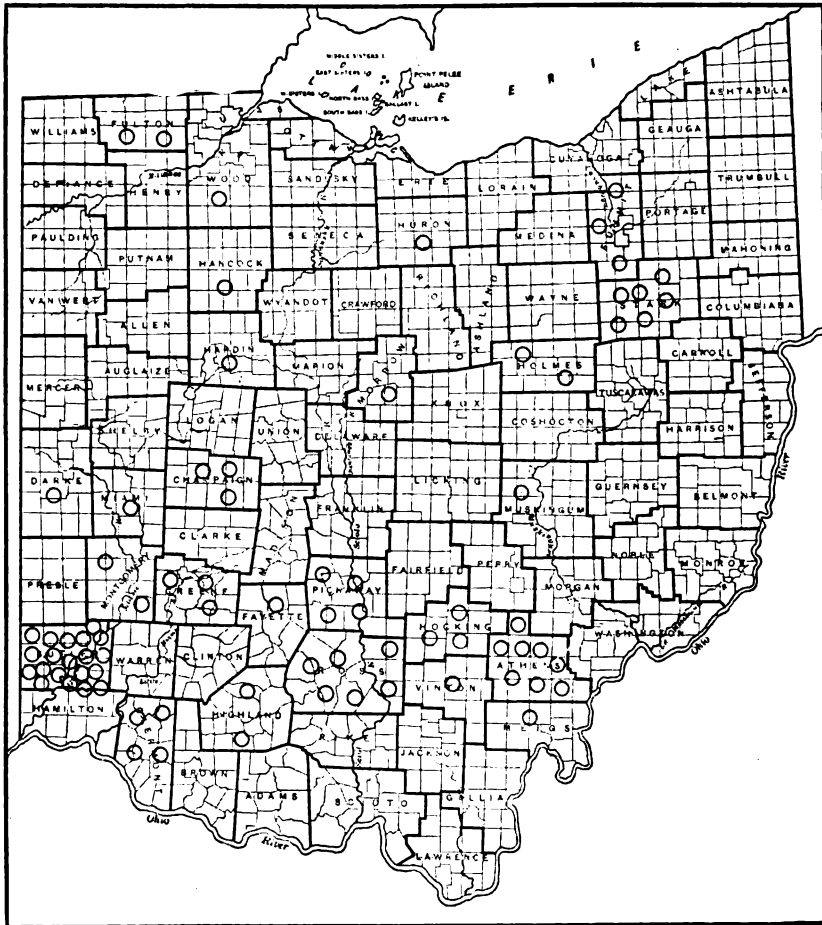
## IN CATTLE.



The circles indicate the localities from which the disease was reported. See page 675.

## INFECTIOUS KERATITIS.

## SORE EYES IN CATTLE.



The circles indicate the localities from which the disease was reported. See page 676.

## TUBERCULOSIS.

## IN SWINE.



The black spots indicate the counties in which the disease has been investigated by the Board or by Federal inspectors.

Of a car lot of hogs shipped from Ohio, and killed at a Pittsburg abattoir on October 9, 1909, 74 had tuberculosis. See page 662.

## SOUTHERN CATTLE QUARANTINE STATIONS.

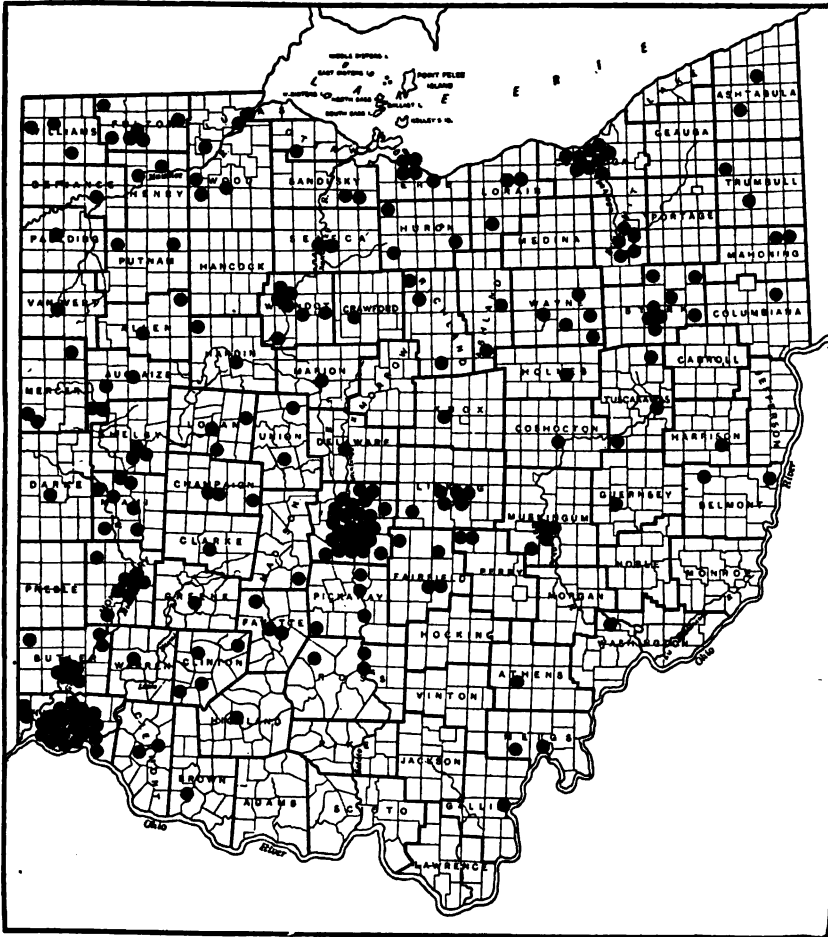


The black spots on the map indicate the localities visited for the purpose of inspecting Southern cattle quarantine pens.

These places are inspected every year previous to the issuing of permits for the unloading of Southern cattle for the purpose of immediate slaughter.

The enforcement of regulations under which these inspections are made have resulted in the disappearance of Southern cattle fever (Texas fever) in Ohio.





Map showing approximate location of the 239 licensed veterinarians in Ohio for the year 1909.

# FINANCIAL REPORT OF THE STATE BOARD OF LIVE STOCK COMMISSIONERS NOVEMBER 15, 1908, TO NOVEMBER 15, 1909.

## Appropriation for Suppression and Prevention of Diseases Among Live Stock.

To balance of appropriation by the General Assembly for the year ending February 15, 1909.....	\$1,283 04	
To appropriation by the General Assembly for the year ending February 15, 1910.....	15,000 00	
By salary of Paul Fischer, State Veterinarian.....		\$2,300 00
By salary of M. B. Lamb, Assistant State Veterinarian.....		1,766 61
By salary of A. D. Fitzgerald, Pathologist.....		999 97
By salary of G. H. Pierce, Field Veterinarian.....		355 00
By salary of F. A. Zimmer, Field Veterinarian.....		360 00
By salary of Eleanor Critchfield, Stenographer.....		390 00
By salary of A. L. Smith, Laboratory Assistant.....		330 00
By salary of Arthur Allen, Laborer, serum farm.....		340 00
By salary of S. R. Howard, District Veterinarian.....		40 00
By salary of H. S. Murphey, District Veterinarian....		205 00
By salary of Geo. U. Marchand, District Veterinarian..		15 00
By salary of Wm. R. Howe, District Veterinarian.....		5 00
By salary of C. H. Case, District Veterinarian.....		280 08
By salary of H. S. Boggs, District Veterinarian.....		16 00
By salary of J. E. Johnston, District Veterinarian....		10 00
By salary of Chas. H. Tiffin, District Veterinarian....		10 00
By salary of E. C. Limbaugh, District Veterinarian....		10 00
By expense of Paul Fischer.....		505 78
By expense of M. B. Lamb.....		676 11
By expense of A. D. Fitzgerald.....		155 85
By expense of G. H. Pierce.....		175 44
By expense of F. A. Zimmer.....		213 58
By expense of S. R. Howard.....		25 50
By expense of H. S. Murphey.....		192 09
By expense of Geo. U. Marchand.....		6 00
By expense of C. H. Case.....		113 00
By expense of E. L. Bertram.....		7 35
By expense of E. C. Limbaugh.....		3 75
By expense of Members of Board.....		27 90
By books for library.....		41 80
By postage.....		150 00
By laboratory supplies.....		818 10
By State Fair exhibit.....		109 47
By office supplies.....		595 52
By telegraph and telephone service.....		45 89
By etchings and halftones for publications.....		24 61
By court costs in Dayton glanders suits.....		363 75
By balance in fund.....		4,608 89
Totals.....	\$16,283 04	\$16,283 04

## APPROPRIATION FOR SERUM FOR HOG CHOLERA.

To appropriation by General Assembly for year ending February 15, 1909.....	\$3,000 00	
To amount received from sale of serum and pigs.....	1,199 61	
By amount paid for care of pigs.....		\$89 40
By amount paid for feed supplies.....		546 36
By amount paid for labor and material, equipping serum farm.....		2,193 64
By balance in fund.....		799 47
Totals.....	\$4,199 61	\$4,199 61

In explanation of the statement on the foregoing page:

Dr. Fischer's salary for the first half of February, 1909, amounting to \$100, was paid out of an emergency fund appropriated for glanders investigations in 1906, the regular fund for suppression of diseases among animals having been exhausted. Similarly, Dr. Lamb was paid an additional sum of \$66.67 as salary, besides \$27.70 for traveling expenses for the same period.

The salary of Dr. Fitzgerald was based on half time from April 1st to June 30th, after which he received full salary.

The salaries of Drs. Pierce and Zimmer, as field veterinarians, were \$55 and \$60 per month, respectively, for July, and \$100 per month after that time.

The salary of A. L. Smith, at \$60 per month, began May 15, 1909; that of Arthur Allen was \$40 per month beginning April 15, and \$50 per month after May 1st. 6

The salary of the stenographer, \$60 per month, began April 15, 1909.

A. P. SANDLES,

*Secretary.*

PAUL FISCHER,

*State Veterinarian.*

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## DESCRIPTION OF PLATE I.

This photograph represents a pen of four pigs of the same litter, numbered 180, 181, 182 and 183, and weighing 23, 27, 25 and 25 pounds, respectively.

On June 24, 1909, each of these four pigs was infected with hog cholera by the intra-muscular injection of two cubic centimeters of hog cholera virus (blood taken from a pig sick with cholera).

Nos. 182 and 183 received, each, in addition to the virus, ten cubic centimeters of hog cholera protective serum, injected intra-muscularly. Nos. 180 and 181 received no serum.

The pigs were kept in the same pen and all four were treated alike.

On July 14, 1909, pig No. 180 died of cholera. Pig No. 181 was very sick from the same cause and was bled to death to obtain virulent blood for further experiments.

Pigs Nos. 182 and 183 never showed any disturbance of health, although continually exposed to infection for several months. They were healthy and thrifty on the date of this report, November 1, 1909.

The photograph was made July 14, 1909, at Reynoldsburg.

## LICENSED VETERINARIANS OF OHIO BY CITIES.

Ada .....	Oscar C. Pettiford.	Cleveland.....	Wm. C. Eddy.
Alliance .....	E. W. Brumpter.		Oliver F. Nugent.
Akron .....	Claude H. Case.		Wm. H. Redhead.
	Casimir C. Crane.		Edgar H. Shepard.
	John F. Planz.		Wilfred J. Torrence.
	Geo. C. Webb.	Clyde .....	Wm. Matz.
	Joseph Wingerter.		A. E. Metzger.
Applecreek .....	Alvin A. Reinhardt.	Columbus .....	Harry M. Brown.
Archbold .....	Clarence S. Bucher.		Walter A. Brown.
Ashville .....	J. L. Spindler.		Louis W. Carl.
Athens .....	D. C. Snow.		Rolly J. Carver.
Austin .....	R. E. Thomson.		C. E. Cook.
Baltimore .....	M. H. Palmer.		Lewis E. Epple.
Batavia .....	F. R. Smythe.		H. E. Ewing.
Bellevue .....	J. P. Norton.		Paul Fischer.
Bellefontaine .....	Chas. C. Yule.		A. D. Fitzgerald.
Bellville .....	Jas. A. Lee.		A. G. Fraser.
Berlin .....	J. D. Fair.		Frank Griffin.
Beverly .....	C. M. Stull.		Edward K. Hedges.
Blanchester .....	A. M. Elchelberger.		Thos. B. Hillock.
Bluffton .....	Reuben Hilty.		N. W. Hillock.
Bowling Green.....	S. W. Bailey.		Morgan B. Lamb.
Bradford .....	Geo. C. Faun.		Chas. E. Leist.
Brookville .....	Henry W. McMillen.		J. H. McNeill.
Bryan .....	Ward T. Huffman.		Geo. H. Pierce.
	Eli C. Wisman.		Frank W. Simons.
Bucyrus .....	Clement L. Williamson.		J. E. Turner.
Cadiz .....	Samuel H. Kent.		D. S. White.
Cambridge .....	M. Elsey.		F. A. Zimmer.
	Clark H. Hays.	Columbiana .....	W. O. McGulgan.
Canal Winchester.	Edgar T. Leidy.	Continental .....	Merrill M. Edwards.
Canton .....	L. D. Blanchard.	Coshocton .....	J. E. Foster.
	Albert T. Bowman.	Covington .....	Lewis E. Moore.
	C. B. Frederick.	Dayton .....	Wm. R. Howe.
	Geo. L. Schneider.		Wm. A. Kramer.
Carey .....	Fred E. Anderson.		Lewis M. Manley.
	W. O. Longfellow.		V. E. Michael.
	Frank L. Moyer.		Walter Shaw.
	Harry E. Myers.		Don I. Skidmore.
Chicago Junction...	Jos. H. Jefferson.	Dalton .....	Wm. N. LaViers.
Cincinnati .....	G. R. Agin.	Defiance .....	Wm. D. Everest.
	Wm. M. Burson.	Delaware .....	T. E. Cowgill.
	H. A. Christmann.	Deshler .....	C. C. Sockman.
	Louis P. Cook.	Edon .....	Geo. C. Reese.
	Norton Dock.	Elmore .....	E. W. Probel.
	Louis P. Foss.	Elyria .....	Edw. O. Hess.
	P. A. Franzman.		L. A. Severcool.
	W. C. Hamilton.	Fayette .....	Geo. E. Clark.
	Geo. A. Handley.	Flushing .....	Clarence L. Henderson.
	Otto J. Huth.	Ft. Recovery.....	Frederick Miller.
	E. W. Jansman.		G. B. Taylor.
	Harry J. Korfhagen.	Gahanna .....	E. C. Odell.
	John C. McLeod.	Gallipolis .....	Jos. B. Johnston.
	John C. Meyer.	Georgetown .....	Walter G. Boehme.
	G. P. Rebold.	Germantown .....	C. D. Turney.
	Max Siereveld.	Grand Rapids.....	Ervin M. DeTray.
	Geo. F. Snider.	Granville .....	W. E. Clemons.
	W. H. Timmons.		L. J. Richards.
	Henry D. Townley.	Greenville .....	H. N. Jeffries.
Circleville .....	E. L. Price.	Hamilton .....	Stanley M. Brown.
Cleveland .....	Samuel Burrows.		H. M. Newton.
	Arthur S. Cooley.		C. E. Sater.
	Albert E. Cunningham.		Chas. H. Tiffin.
	Lewis J. Dunn.		John P. Wilson.

## LICENSED VETERINARIANS OF OHIO BY CITIES—Concluded.

Harrisburg .....	Wm. D. Worthington.	Richwood .....	Ivan J. Brobeck.
Harrison .....	Wm. A. Axby.	Rockcreek .....	Bert W. Castle.
	O. D. Maddux.	Roseville .....	H. D. Larzelere.
	E. L. McIntosh.	Rutland .....	Geo. H. Lasher.
Hartwell .....	H. J. Raine.	Sabina .....	E. C. Langdon.
Hillsboro .....	S. R. Howard.	Sandusky .....	Wm. A. Ferry.
Huron .....	Clarence F. Ward.		Emmet R. Hinkley.
Jefferson .....	Luther D. Whitwood.		J. W. Reeder.
Jeffersonville .....	Herbert L. Little.		Henry J. Rowe.
Jeromeville .....	M. C. McClain.	Shelby .....	H. D. Campbell.
Kenton .....	Irvin A. Wynn.	Sidney .....	W. J. Brandewie.
Kingston .....	Peyton D. Athins.		A. Sanderson.
	H. S. Boggs.		W. D. Stockstill.
Lake .....	Arthur E. Miller.	Springfield .....	Howard E. Beer.
Lancaster .....	James W. Price.		C. J. Morrow.
	J. E. Thomas.	St. Marys.....	F. C. Mockstroth.
Lebanon .....	John W. Bratten.	Swanton .....	B. C. Eldridge.
Leipsic .....	Chas. W. Fogle.	Thornville .....	Frank L. Edmund.
Libery Center.....	L. J. Price.		H. C. Witmer.
Lima .....	J. H. Blattenburg.	Tippecanoe City...	Paul A. Johnson.
Loudonville .....	F. M. Smalley.	Tiffin .....	Chas. E. Hershey.
Louisville .....	E. L. Metzger.		Wm. B. Washburn.
Madisonville .....	G. A. Stirnkorb.	Toledo .....	Geo. L. Frese.
Marion .....	John F. Gruber.		John V. Newton.
Marseilles.....	Geo. H. Chandler.	Troy .....	Fred H. Dettman.
Martins Ferry.....	C. G. Shreve.	Upper Sandusky...	G. W. Cliffe.
Martinsville .....	M. J. Jones, Jr.	Urbana .....	Albert Buck.
Marysville .....	H. B. Turney.		Chas. E. Inskeep.
Mechanicsburg ....	E. R. Stockwell.	Urchaville .....	G. U. Marchand.
Mandon .....	E. W. Miller.	Van Wert.....	F. F. Sheets.
Middletown .....	W. B. Scott.	Wapakoneta .....	A. B. Musser.
	Harry Worcester.	Warren .....	Wm. H. McNaughton.
Minerva.....	Arvins J. Wolf.	Washington C. H. ...	Wm. H. Gribble.
Minerca .....	A. J. Jeannins.		Victor P. Smith.
Montpellier .....	B. F. Wingert.	Wauseon .....	R. I. Bernath.
Mt. Eaton.....	W. C. Graber.		Wm. R. Clark.
Mt. Sterling.....	Bruce H. Edgington.		Albert J. Kline.
Mt. Vernon.....	E. C. Limbaugh.	Wellington .....	Ronald G. Holland.
Napoleon .....	Karl H. Kolbe.	West Farmington...	Aubrey B. Detchon.
Nevada .....	Stanton E. Bretz.	West Liberty.....	Jacob F. Stevens.
Newark .....	B. H. Priest.	West Mansfield....	Herbert T. Skeels.
	Frederick Priest.	West Milton.....	David A. Emerick.
	Howard L. Williams.	Westerville .....	Henry P. Miller.
New Bremen.....	A. Broerman.		Herman W. Miller.
	H. J. Schmidt.		R. H. Nutt.
Newcomerstown ..	D. J. Frame.	Weston .....	Eugene G. Lathrop.
New Holland.....	O. J. Moon.	Whitehouse .....	R. D. Heller.
New London.....	Albert Collins.	Wilmington .....	Sidney D. Myers.
Orrville .....	Benj. Studer.	Wooster .....	Harry G. Dailey.
Pataskala .....	W. A. Smith.	Xenia .....	Wm. A. Labron.
Paulding .....	Byron A. Owen.	Youngstown .....	Samuel R. Craver.
Pickerington .....	W. H. French.		Robt. W. Whitehead.
Piqua .....	A. M. Houser.	Zanesville .....	E. H. Callander.
	J. E. Johnston.		C. B. Denman.
Pomeroy .....	Jas. E. Stansbury.		Chas. A. Weber.
Plymouth .....	I. A. Ruby.		

AUG 12 1915



